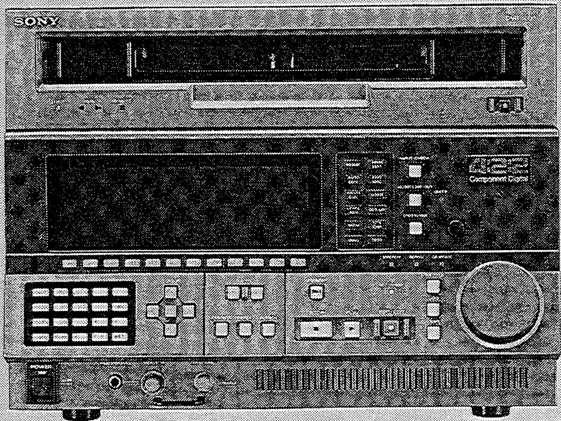
SONY

DIGITAL CASSETTE VTR

DVR-1000



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Component Digital

MAINTENANCE MANUAL

Volume 2 2nd Edition (Revised 2)

Serial No.33001 and Higher (J)

Serial No.32101 and Higher (UC)

Serial No.32201 and Higher (EK)

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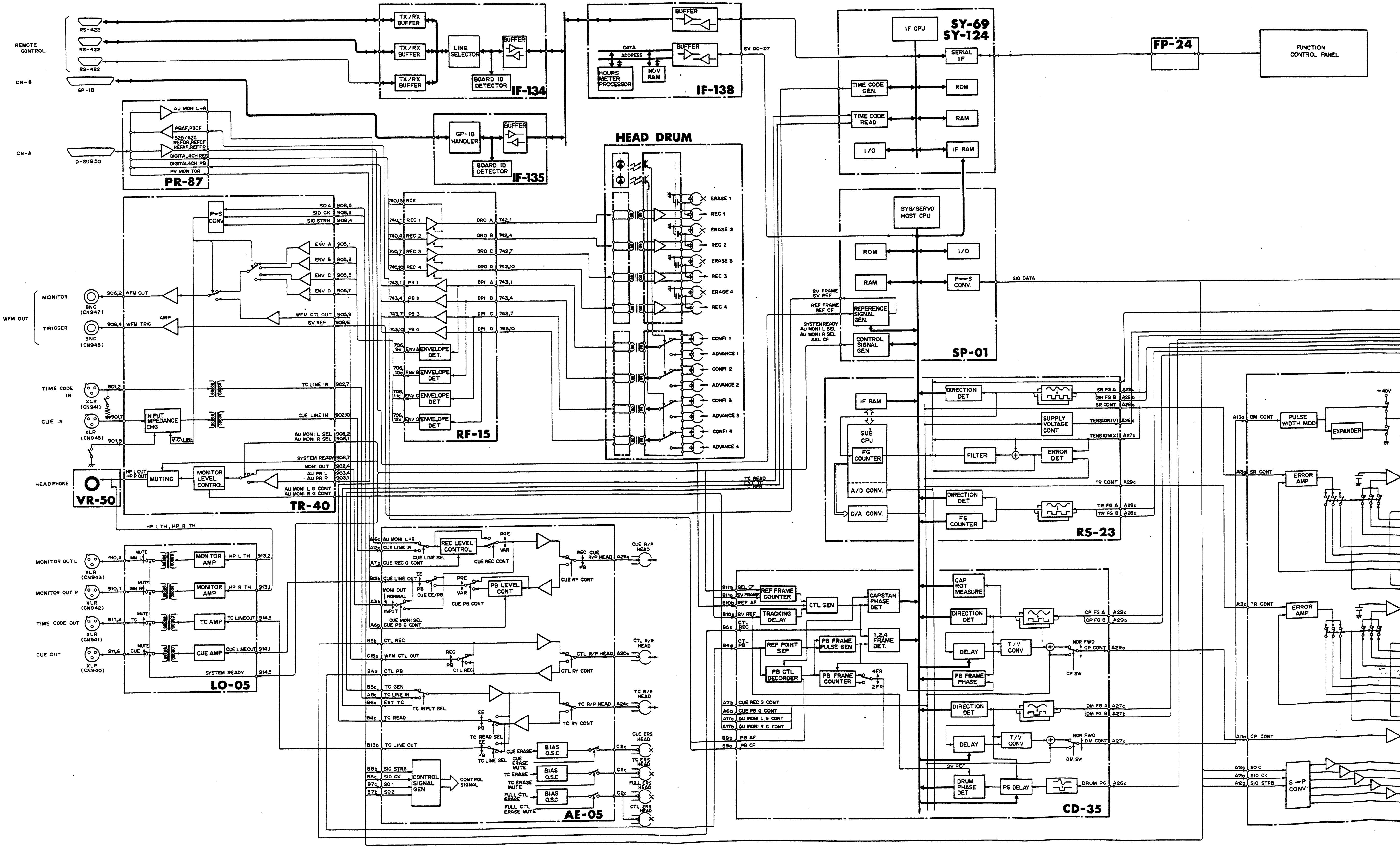
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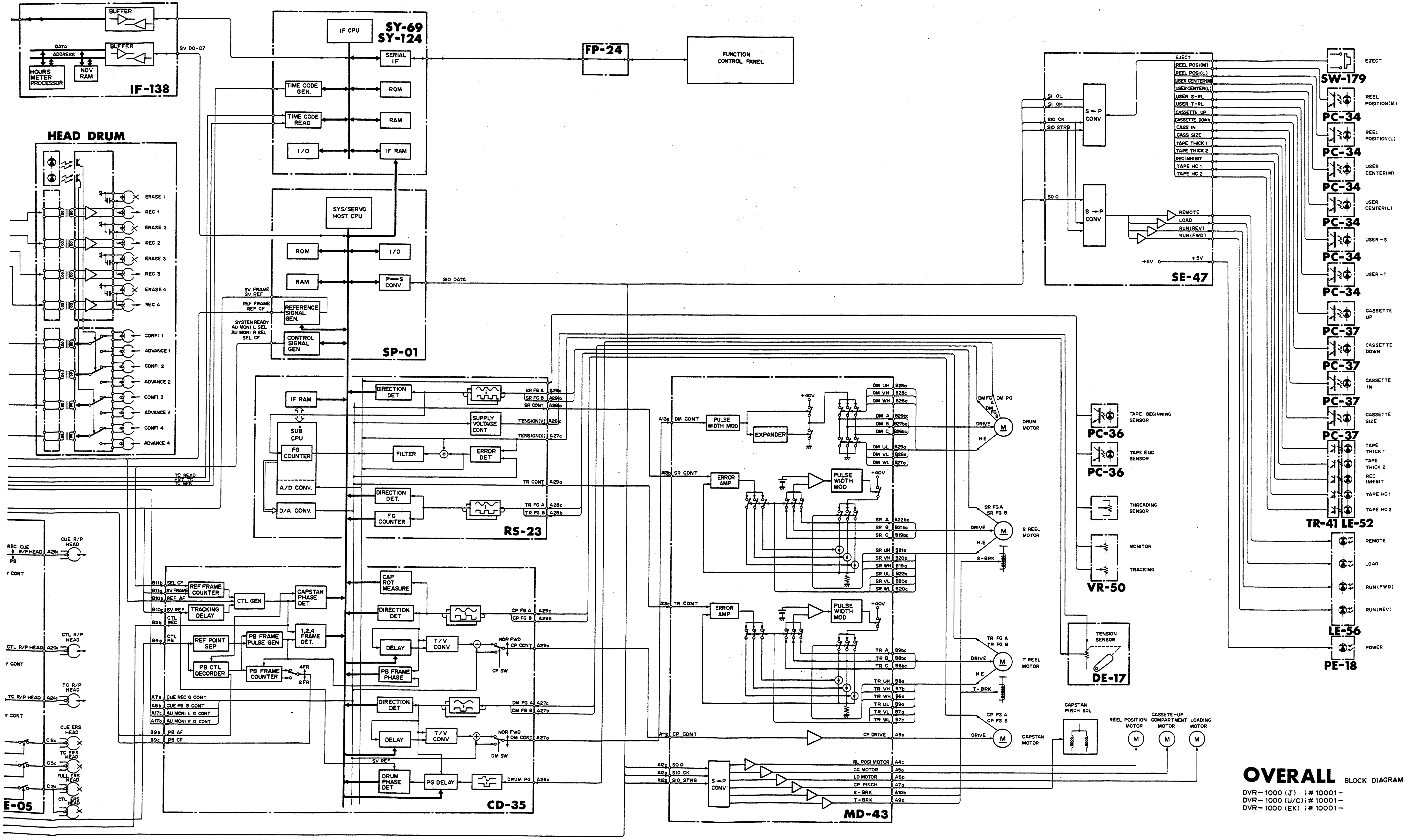

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CAPSTAN PHASE DET
TRACKING DELAY
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REF AF
SV REF
CTL REC
CTL PB
REF POINT SEP
PB FRAME PULSE GEN
1,2,4 FRAME DET.
PB CTL DECORDER
PB FRAME COUNTER
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AU MONI R G CONT
PB AF
PB CF
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T/V CONV
PB FRAME PHASE
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CP SW
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CP FG B
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DM FG B
DM CONT
DM SW
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CTL R/P HEAD
TC R/P HEAD
CUE ERS HEAD
TC ERS HEAD
FULL ERS HEAD
CTL ERS HEAD
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DM VH
DM WH
DM A
DM B
DM C
DM UL
DM VL
DM WL
SR A
SR B
SR C
SR UH
SR VH
SR WH
SR UL
SR VL
SR WL
TR A
TR B
TR C
TR UH
TR VH
TR WH
TR UL
TR VL
TR WL
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CP PINCH
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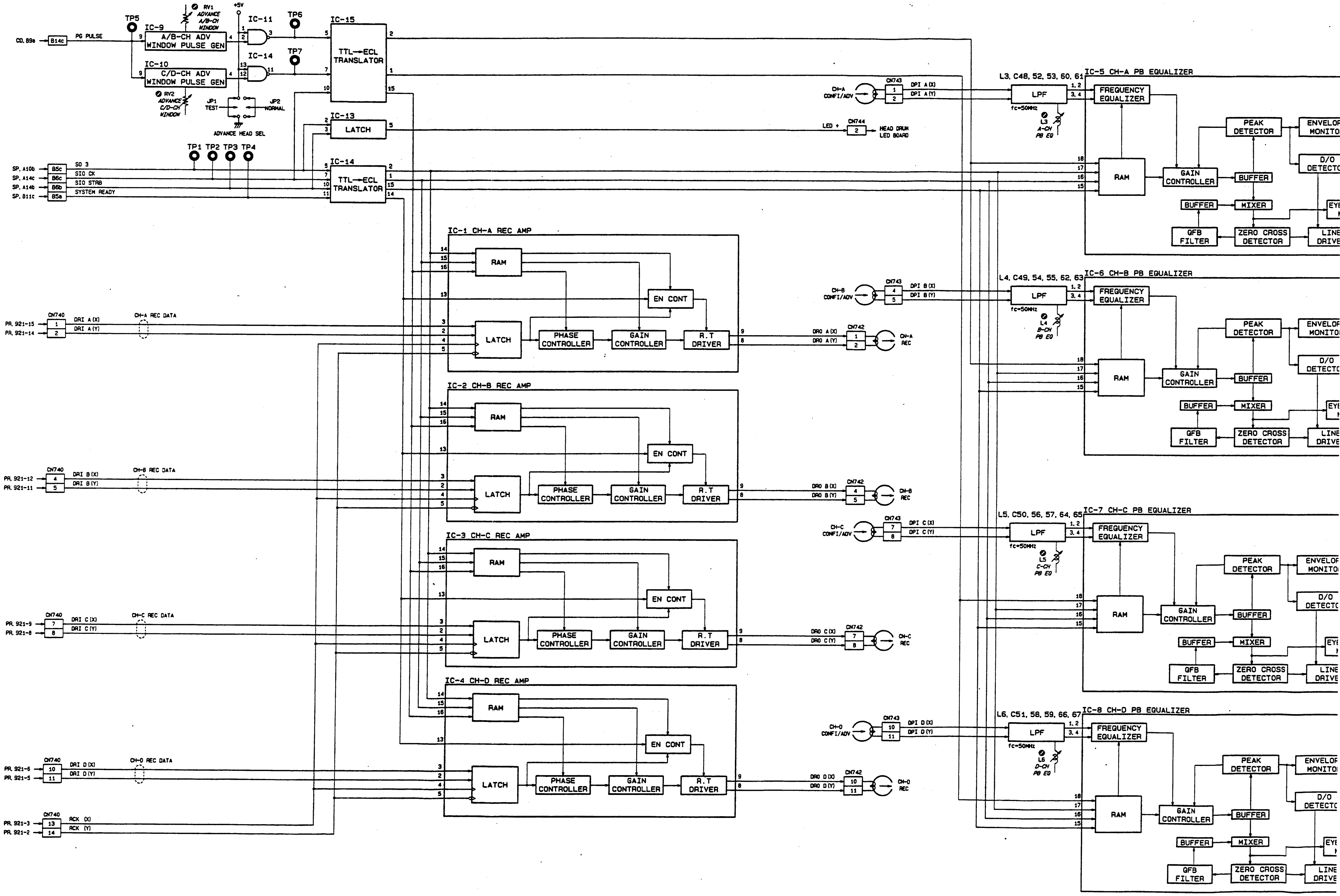
DVR-1000 (U/C);#10001-
DVR-1000 (EK) ;#10001-

RF-15 BOARD

RF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+5V
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PR, 921-2
RCK (X)
RCK (Y)
CN742
DRO A (X)
DRO A (Y)
CH-A REC
DRO B (X)
DRO B (Y)
CH-B REC
DRO C (X)
DRO C (Y)
CH-C REC
DRO D (X)
DRO D (Y)
CH-D REC
CN743
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DPI A (X)
DPI A (Y)
CH-B CONFI/ADV
DPI B (X)
DPI B (Y)
CH-C CONFI/ADV
DPI C (X)
DPI C (Y)
CH-D CONFI/ADV
DPI D (X)
DPI D (Y)
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CN744
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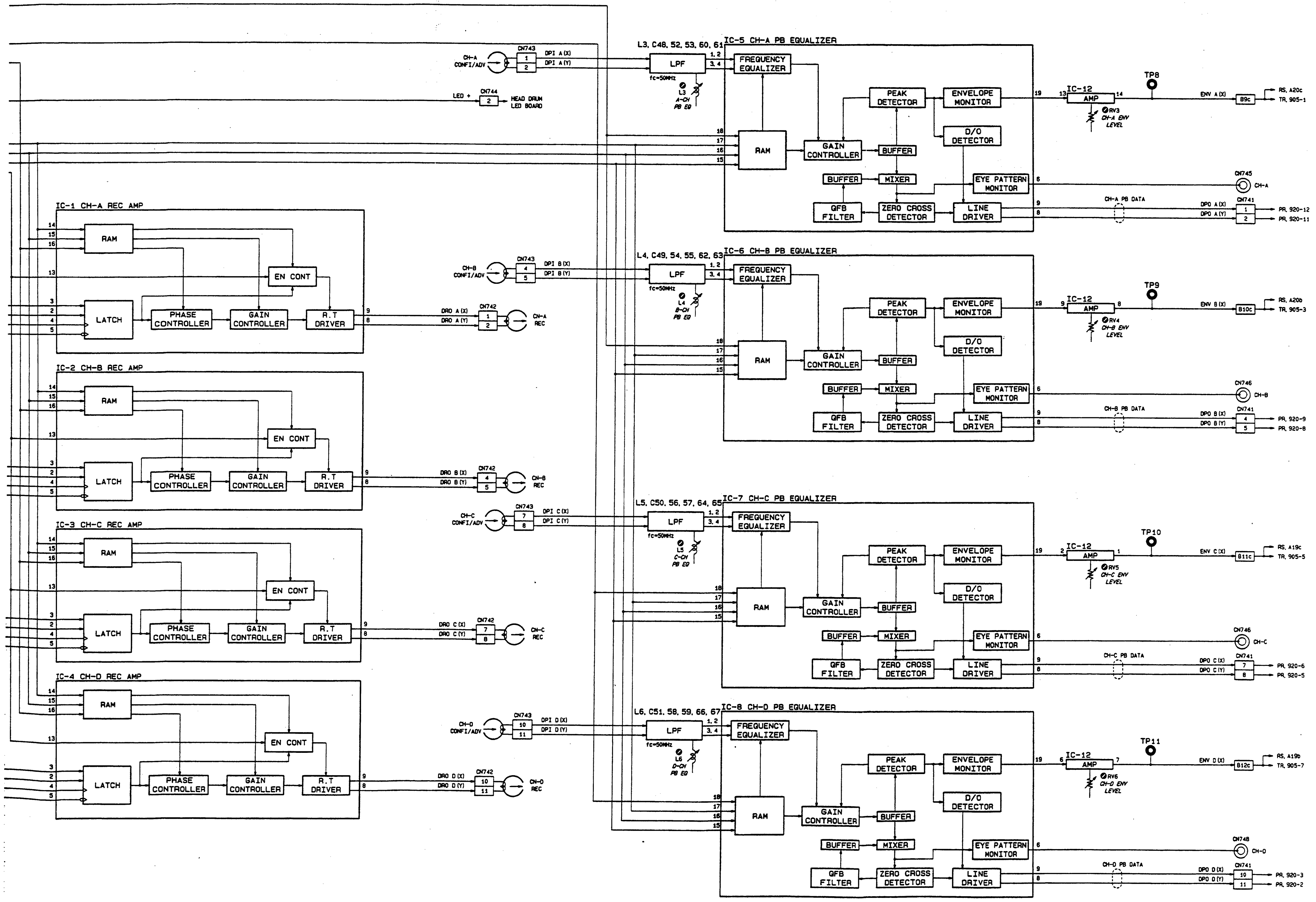
IC-8 CH-D PB EQUALIZER
LPF
fc=50MHz
L3 A-CH PB EQ
L4 B-CH PB EQ
L5 C-CH PB EQ
L6 D-CH PB EQ
FREQUENCY EQUALIZER
RAM
GAIN CONTROLLER
PEAK DETECTOR
BUFFER
MIXER
QFB FILTER
ZERO CROSS DETECTOR
ENVELOP MONITO
D/O DETECTO
EYE
LINE DRIVE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IC-2 CH-B REC AMP
IC-3 CH-C REC AMP
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RAM
EN CONT
LATCH
PHASE CONTROLLER
GAIN CONTROLLER
R.T DRIVER
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2
4
5
9
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DPI A (X)
DPI A (Y)
LED +
CN744
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DPI B (X)
DPI B (Y)
CH-C CONFI/ADV
DPI C (X)
DPI C (Y)
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L5 C-CH PB EQ
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IC-7 CH-C PB EQUALIZER
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RS, A19c
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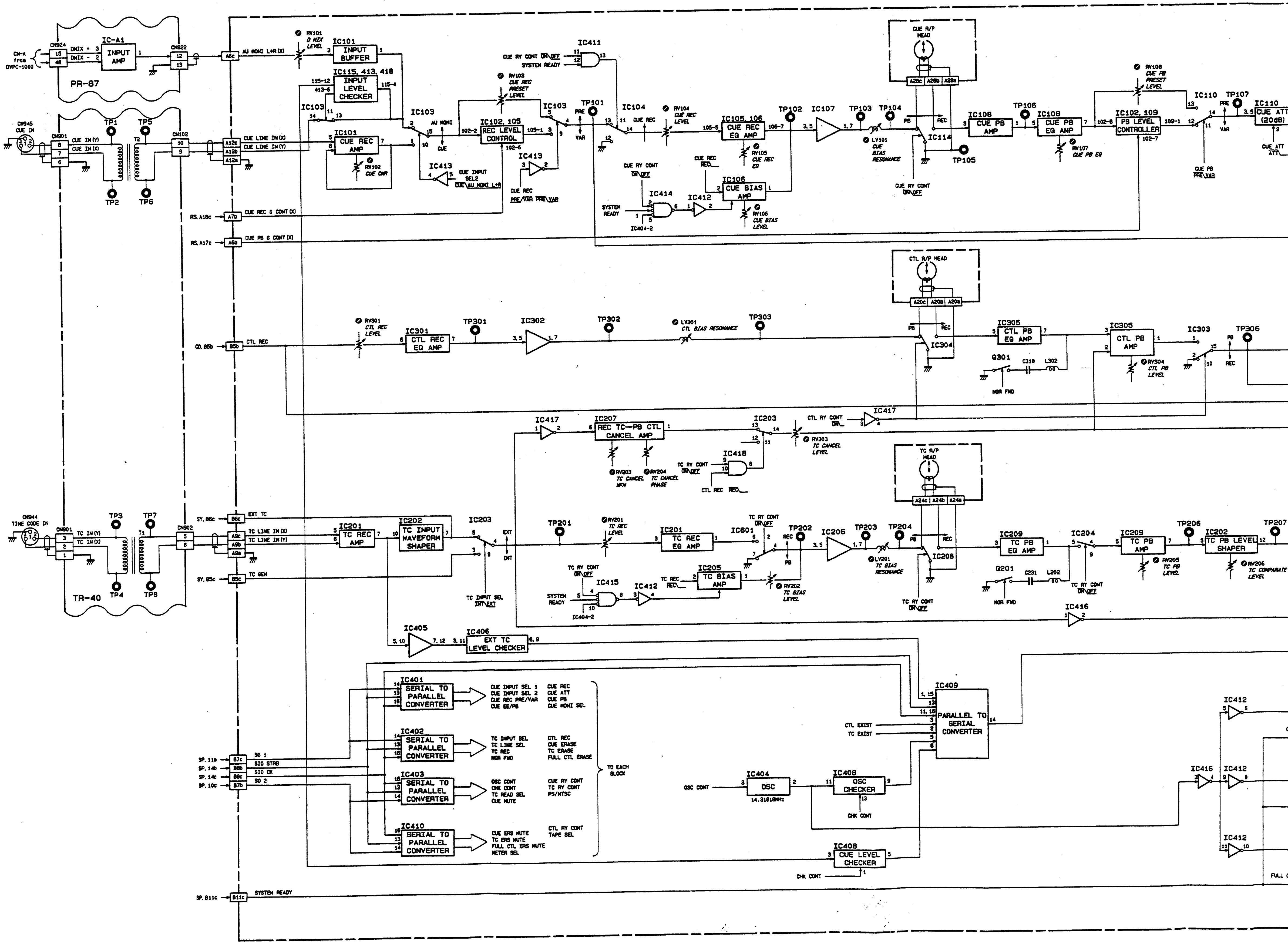
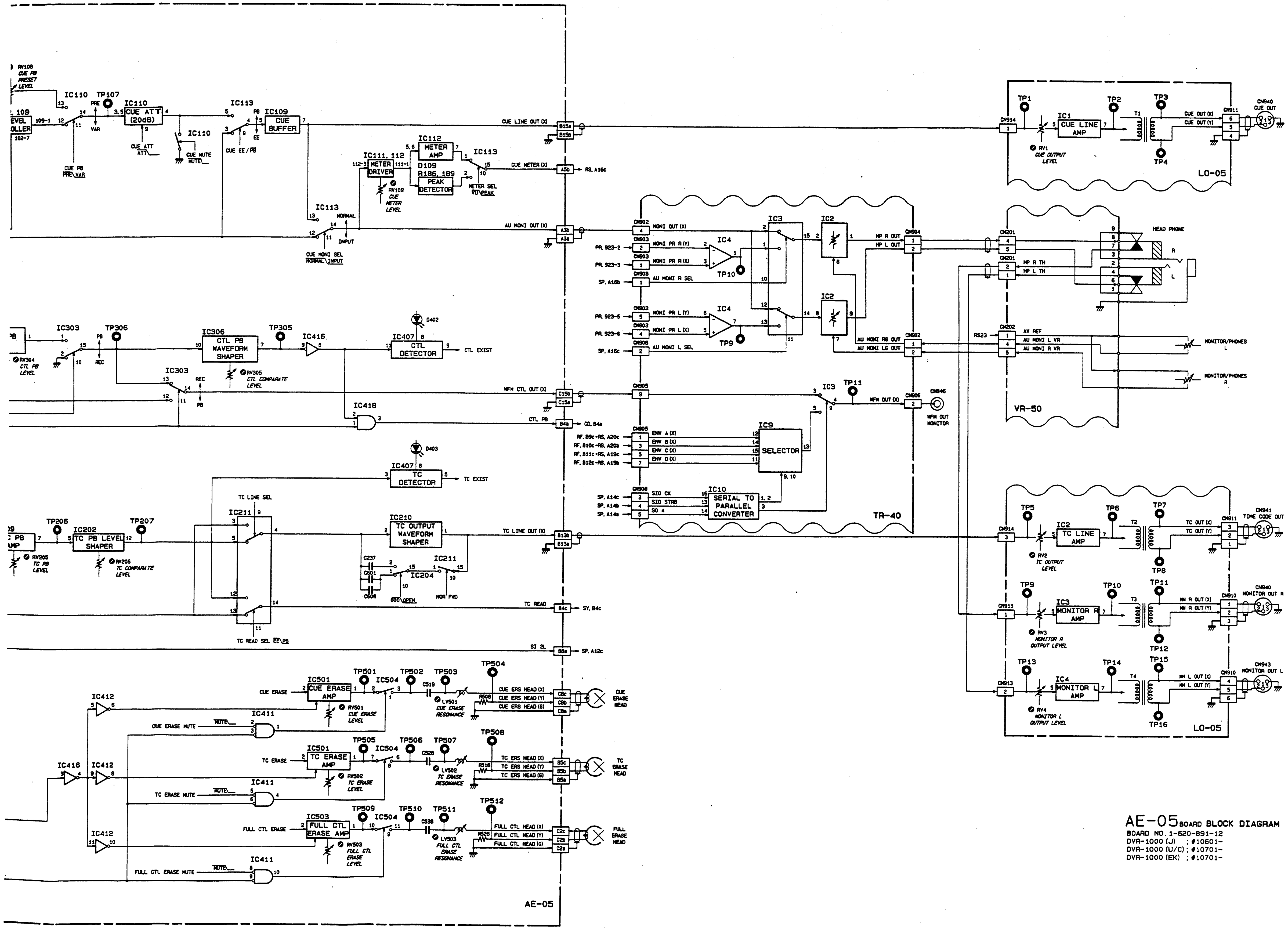
RS, A19b
TR, 905-7
CN745
CH-A
CN746
CH-B
CH-C
CN748
CH-D
CH-A PB DATA
CH-B PB DATA
CH-C PB DATA
CH-D PB DATA
CN741
DPO A (X)
DPO A (Y)
DPO B (X)
DPO B (Y)
DPO C (X)
DPO C (Y)
DPO D (X)
DPO D (Y)
PR, 920-12
PR, 920-11
PR, 920-9
PR, 920-8
PR, 920-6
PR, 920-5
PR, 920-3
PR, 920-2

RF-15 BOARD BLOCK DIAGRAM
BOARD NO. 1-620-901-11, 12, 13
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

AE-05 BOARD

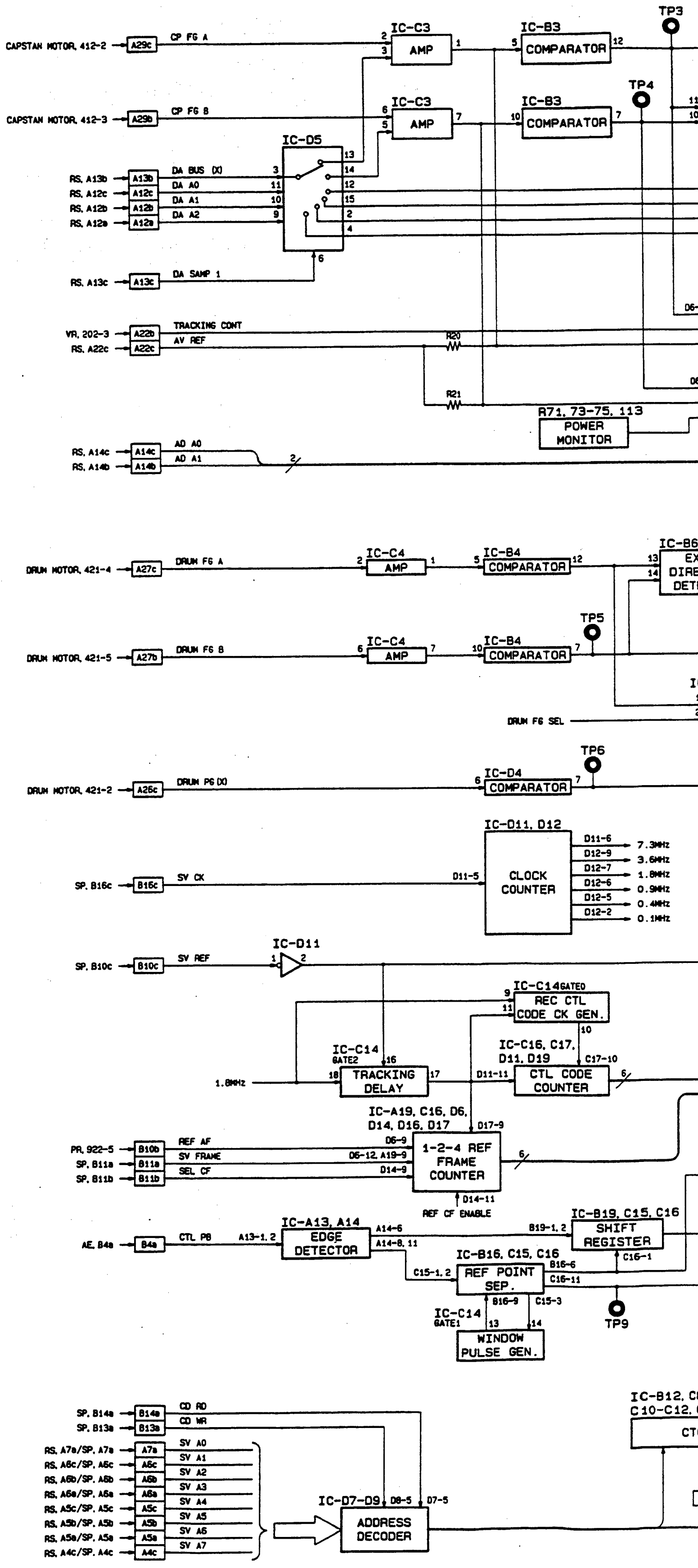
Audio (CUE/CTL) & Erase

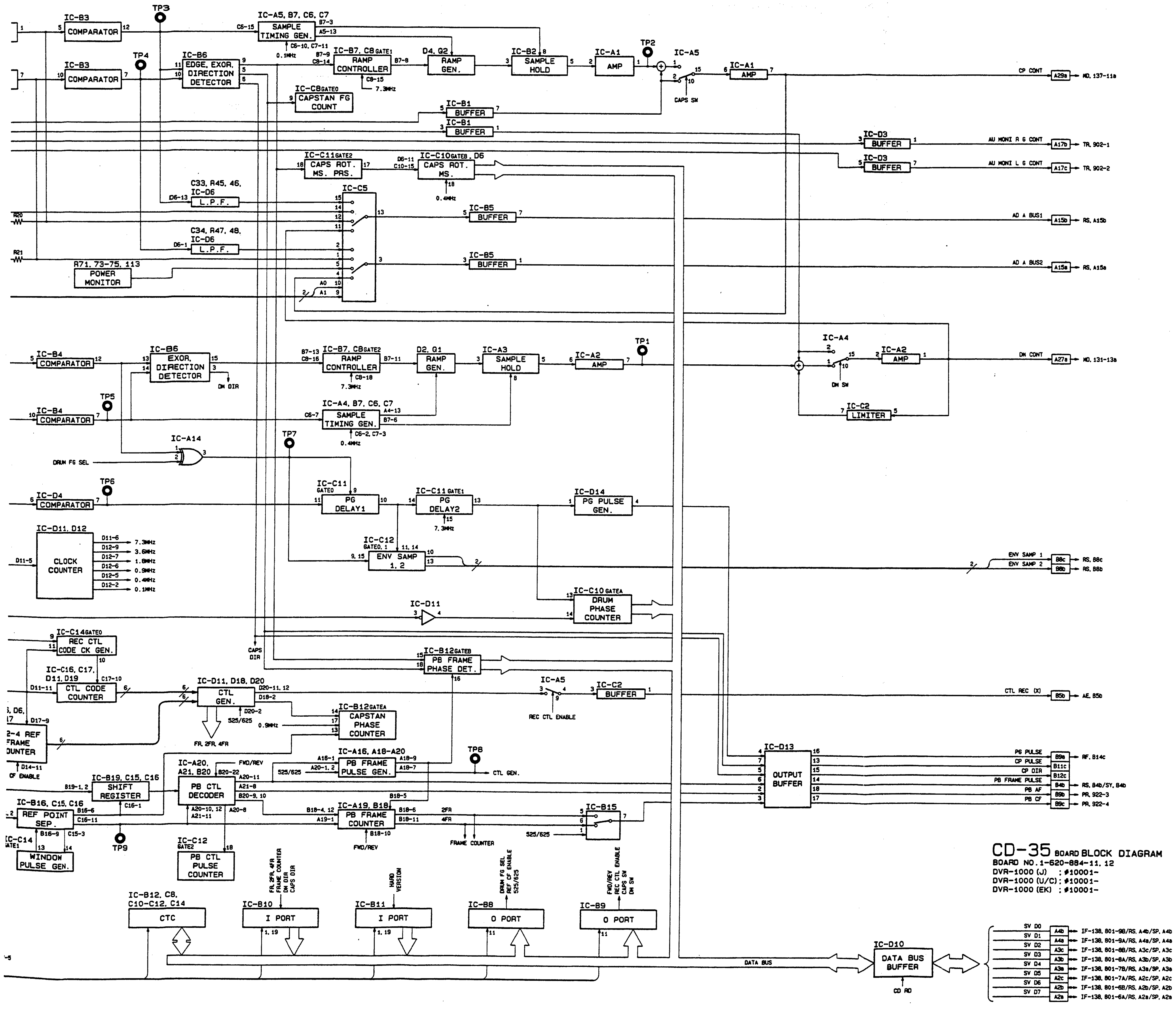

CN-A from DVPC-1000
CN924
DMIX +
DMIX -
IC-A1 INPUT AMP
CN922
PR-87
CN945 CUE IN
CN901
CUE IN (Y)
CUE IN (X)
TP1
TP5
TP2
TP6
T1
T2
CN102
AU MONI L+R (X)
RV101 D MIX LEVEL
IC101 INPUT BUFFER
IC115, 413, 418 INPUT LEVEL CHECKER
IC103
AU MONI
CUE
CUE LINE IN (X)
CUE LINE IN (Y)
IC101 CUE REC AMP
RV102 CUE CMR
IC413
CUE INPUT SEL2
CUE AU MONI L+R
IC102, 105 REC LEVEL CONTROL
RV103 CUE REC PRESET LEVEL
IC413
CUE REC PRE/VAR PRE VAR
IC411
CUE RY CONT ON OFF
SYSTEM READY
IC103
TP101
PRE
VAR
IC104
CUE REC
RV104 CUE REC LEVEL
IC105, 106 CUE REC EQ AMP
RV105 CUE REC EQ
CUE REC REC
IC106 CUE BIAS AMP
RV106 CUE BIAS LEVEL
IC414
IC412
CUE RY CONT ON OFF
SYSTEM READY
IC404-2
TP102
IC107
TP103
TP104
LV101 CUE BIAS RESONANCE
CUE R/P HEAD
A28c A28b A28a
PB
REC
IC114
TP105
CUE RY CONT ON OFF
IC108 CUE PB AMP
TP106
IC108 CUE PB EQ AMP
RV107 CUE PB EQ
RV108 CUE PB PRESET LEVEL
IC102, 109 PB LEVEL CONTROLLER
IC110
TP107
PRE
VAR
CUE PB PRE VAR
IC110 CUE ATT (20dB)
CUE ATT ATT
RS, A18c
CUE REC & CONT (X)
RS, A17c
CUE PB & CONT (X)
CTL R/P HEAD
A20c A20b A20a
CD, B5b
CTL REC
RV301 CTL REC LEVEL
IC301 CTL REC EQ AMP
TP301
IC302
TP302
LV301 CTL BIAS RESONANCE
TP303
PB
REC
IC304
IC305 CTL PB EQ AMP
IC305 CTL PB AMP
RV304 CTL PB LEVEL
Q301
C318
L302
NOR FWD
IC303
TP306
PB
REC
IC417
IC207 REC TC→PB CTL CANCEL AMP
RV203 TC CANCEL MFN
RV204 TC CANCEL PHASE
IC203
RV303 TC CANCEL LEVEL
CTL RY CONT ON
IC417
IC418
TC RY CONT ON OFF
CTL REC REC
TC R/P HEAD
A24c A24b A24a
CN944 TIME CODE IN
CN901
TC IN (Y)
TC IN (X)
TP3
TP7
TP4
TP8
CN902
TR-40
SY, B6c
EXT TC
TC LINE IN (X)
TC LINE IN (Y)
SY, B5c
TC GEN
IC201 TC REC AMP
IC202 TC INPUT WAVEFORM SHAPER
IC203
EXT
INT
TC INPUT SEL INT EXT
TP201
RV201 TC REC LEVEL
IC201 TC REC EQ AMP
IC601
TC RY CONT ON OFF
TP202
REC
PB
IC206
TP203
TP204
LV201 TC BIAS RESONANCE
IC208
TC RY CONT ON OFF
IC205 TC BIAS AMP
RV202 TC BIAS LEVEL
TC REC REC
IC415
IC412
TC RY CONT ON OFF
SYSTEM READY
IC404-2
IC209 TC EQ AMP
Q201
C231
L202
NOR FWD
IC204
TC RY CONT ON OFF
IC209 TC PB AMP
RV205 TC PB LEVEL
TP206
IC202 TC PB LEVEL SHAPER
RV206 TC COMPARATE LEVEL
TP207
IC416
IC405
IC406 EXT TC LEVEL CHECKER
IC401 SERIAL TO PARALLEL CONVERTER
CUE INPUT SEL 1
CUE INPUT SEL 2
CUE REC PRE/VAR
CUE EE/PB
CUE REC
CUE ATT
CUE PB
CUE MONI SEL
IC402 SERIAL TO PARALLEL CONVERTER
TC INPUT SEL
TC LINE SEL
TC REC
NOR FWD
CTL REC
CUE ERASE
TC ERASE
FULL CTL ERASE
IC403 SERIAL TO PARALLEL CONVERTER
OSC CONT
CHK CONT
TC READ SEL
CUE MUTE
CUE RY CONT
TC RY CONT
PS/NTSC
IC410 SERIAL TO PARALLEL CONVERTER
CUE ERS MUTE
TC ERS MUTE
FULL CTL ERS MUTE
METER SEL
CTL RY CONT
TAPE SEL
TO EACH BLOCK
SP, 11a
SP, 14b
SP, 14c
SP, 10c
SO 1
SIO STRB
SIO CK
SO 2
IC409 PARALLEL TO SERIAL CONVERTER
CTL EXIST
TC EXIST
IC404 OSC 14.31818MHz
OSC CONT
IC408 OSC CHECKER
CHK CONT
IC408 CUE LEVEL CHECKER
CHK CONT
IC412
IC416
IC412
IC412
FULL
SP, B11c
SYSTEM READY


RV108
CUE PB PRESET LEVEL
IC110
TP107
PRE
VAR
IC110
CUE ATT (20dB)
CUE ATT ATT
IC110
CUE MUTE MUTE
CUE PB PRE VAR
IC113
IC109
CUE BUFFER
EE
PB
CUE EE/PB
IC112
METER AMP
IC111, 112
METER DRIVER
D109
R186, 189
PEAK DETECTOR
IC113
METER SEL VU PEAK
RV109
CUE METER LEVEL
IC113
NORMAL
INPUT
CUE MONI SEL NORMAL INPUT
CUE LINE OUT (X)
CUE METER (X)
RS, A16c
AU MONI OUT (X)
B15a
B15b
A5b
A3b
A3a
IC303
TP306
PB
REC
RV304
CTL PB LEVEL
IC306
CTL PB WAVEFORM SHAPER
TP305
IC416
RV305
CTL COMPARATE LEVEL
IC407
CTL DETECTOR
D402
CTL EXIST
IC303
REC
PB
WFM CTL OUT (X)
C15b
C15a
IC418
CTL PB
B4a
CD, B4a
D403
IC407
TC DETECTOR
TC EXIST
TC LINE SEL
IC211
TP206
IC202
TC PB LEVEL SHAPER
TP207
RV205
TC PB LEVEL
RV206
TC COMPARATE LEVEL
IC210
TC OUTPUT WAVEFORM SHAPER
TC LINE OUT (X)
B13b
B13a
C237
C601
C608
IC204
IC211
600 OPEN
NOR FWD
TC READ
B4c
SY, B4c
TC READ SEL EE PB
SI 2L
B8a
SP, A12c
IC412
IC501
CUE ERASE AMP
CUE ERASE
TP501
TP502
TP503
TP504
IC504
C519
RV501
CUE ERASE LEVEL
LV501
CUE ERASE RESONANCE
R508
CUE ERS HEAD (X)
CUE ERS HEAD (Y)
CUE ERS HEAD (G)
C8c
C8b
C8a
CUE ERASE HEAD
IC411
CUE ERASE MUTE
MUTE
IC416
IC412
IC501
TC ERASE AMP
TC ERASE
TP505
TP506
TP507
TP508
IC504
C528
RV502
TC ERASE LEVEL
LV502
TC ERASE RESONANCE
R516
TC ERS HEAD (X)
TC ERS HEAD (Y)
TC ERS HEAD (G)
B5c
B5b
B5a
TC ERASE HEAD
IC411
TC ERASE MUTE
MUTE
IC412
IC503
FULL CTL ERASE AMP
FULL CTL ERASE
TP509
TP510
TP511
TP512
IC504
C538
RV503
FULL CTL ERASE LEVEL
LV503
FULL CTL ERASE RESONANCE
R526
FULL CTL HEAD (X)
FULL CTL HEAD (Y)
FULL CTL HEAD (G)
C2c
C2b
C2a
FULL ERASE HEAD
IC411
FULL CTL ERASE MUTE
MUTE
AE-05
CN902
MONI OUT (X)
PR, 923-2
CN903
MONI PR R (Y)
PR, 923-3
MONI PR R (X)
SP, A16b
CN908
AU MONI R SEL
IC4
TP10
IC3
IC2
HP R OUT
HP L OUT
CN904
PR, 923-5
MONI PR L (Y)
PR, 923-6
MONI PR L (X)
SP, A16c
AU MONI L SEL
IC4
TP9
IC2
AU MONI RS OUT
AU MONI LS OUT
CN902
CN905
IC3
TP11
WFM OUT (X)
CN906
CN946
WFM OUT MONITOR
RF, B9c-RS, A20c
RF, B10c-RS, A20b
RF, B11c-RS, A19c
RF, B12c-RS, A19b
ENV A (X)
ENV B (X)
ENV C (X)
ENV D (X)
IC9
SELECTOR
SP, A14c
SP, A14b
SP, A14a
SIO CK
SIO STRB
SO 4
IC10
SERIAL TO PARALLEL CONVERTER
TR-40
TP1
TP2
TP3
CN914
IC1
CUE LINE AMP
T1
CUE OUT (X)
CUE OUT (Y)
CN911
CN940
CUE OUT
RV1
CUE OUTPUT LEVEL
TP4
LO-05
CN201
HEAD PHONE
HP R TH
HP L TH
R
L
CN202
RS23
AV REF
AU MONI L VR
AU MONI R VR
MONITOR/PHONES L
MONITOR/PHONES R
VR-50
TP5
TP6
TP7
CN914
IC2
TC LINE AMP
T2
TC OUT (X)
TC OUT (Y)
CN911
CN941
TIME CODE OUT
RV2
TC OUTPUT LEVEL
TP8
TP9
TP10
TP11
CN913
IC3
MONITOR R AMP
T3
MN R OUT (X)
MN R OUT (Y)
CN910
CN940
MONITOR OUT R
RV3
MONITOR R OUTPUT LEVEL
TP12
TP13
TP14
TP15
IC4
MONITOR L AMP
T4
MN L OUT (X)
MN L OUT (Y)
CN910
CN943
MONITOR OUT L
RV4
MONITOR L OUTPUT LEVEL
TP16
LO-05

AE-05 BOARD BLOCK DIAGRAM
BOARD NO. 1-620-891-12
DVR-1000 (J) : #10601-
DVR-1000 (U/C) : #10701-
DVR-1000 (EK) : #10701-

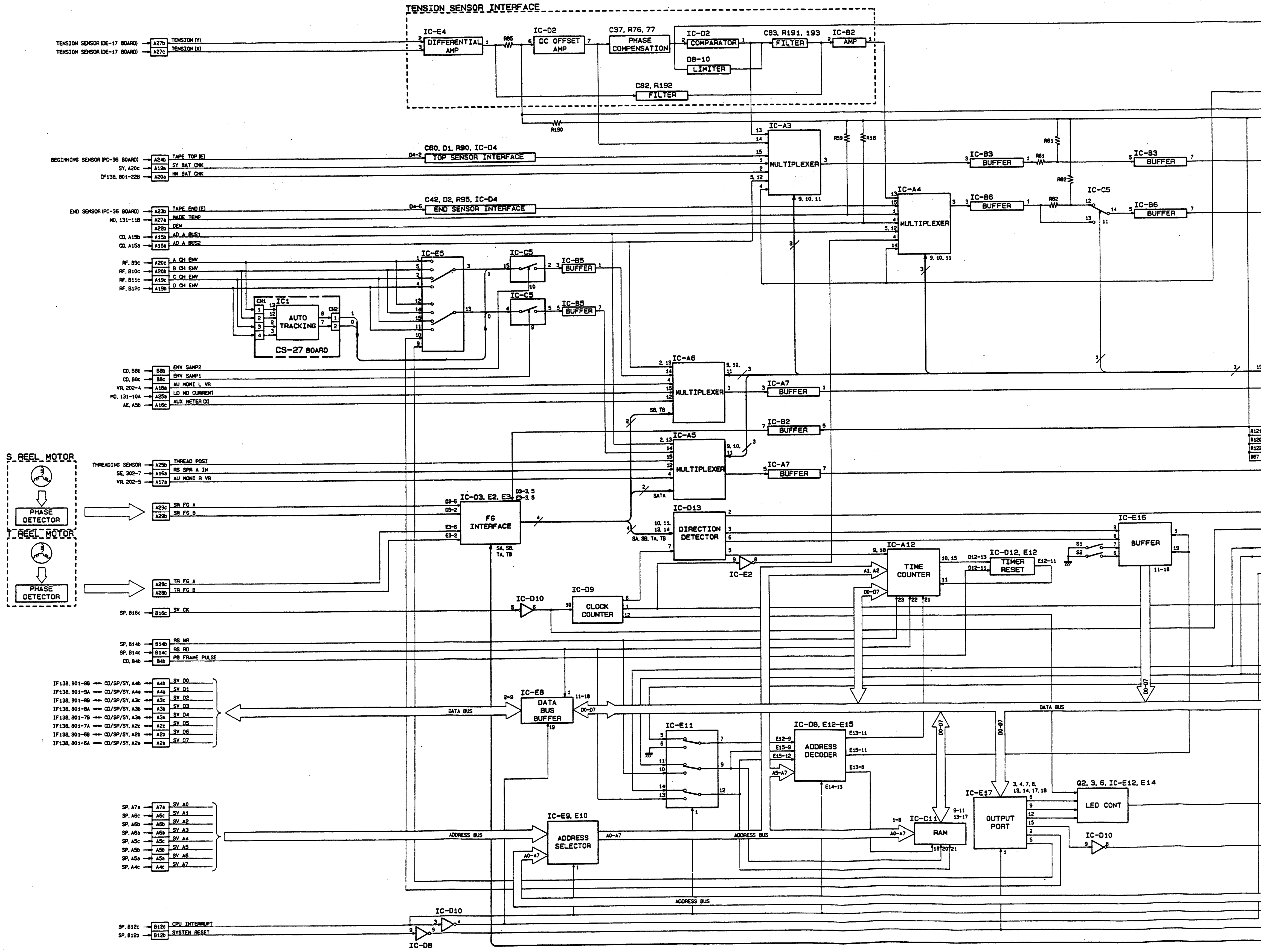
CD-35 BOARD
Capstan & Drum Servo

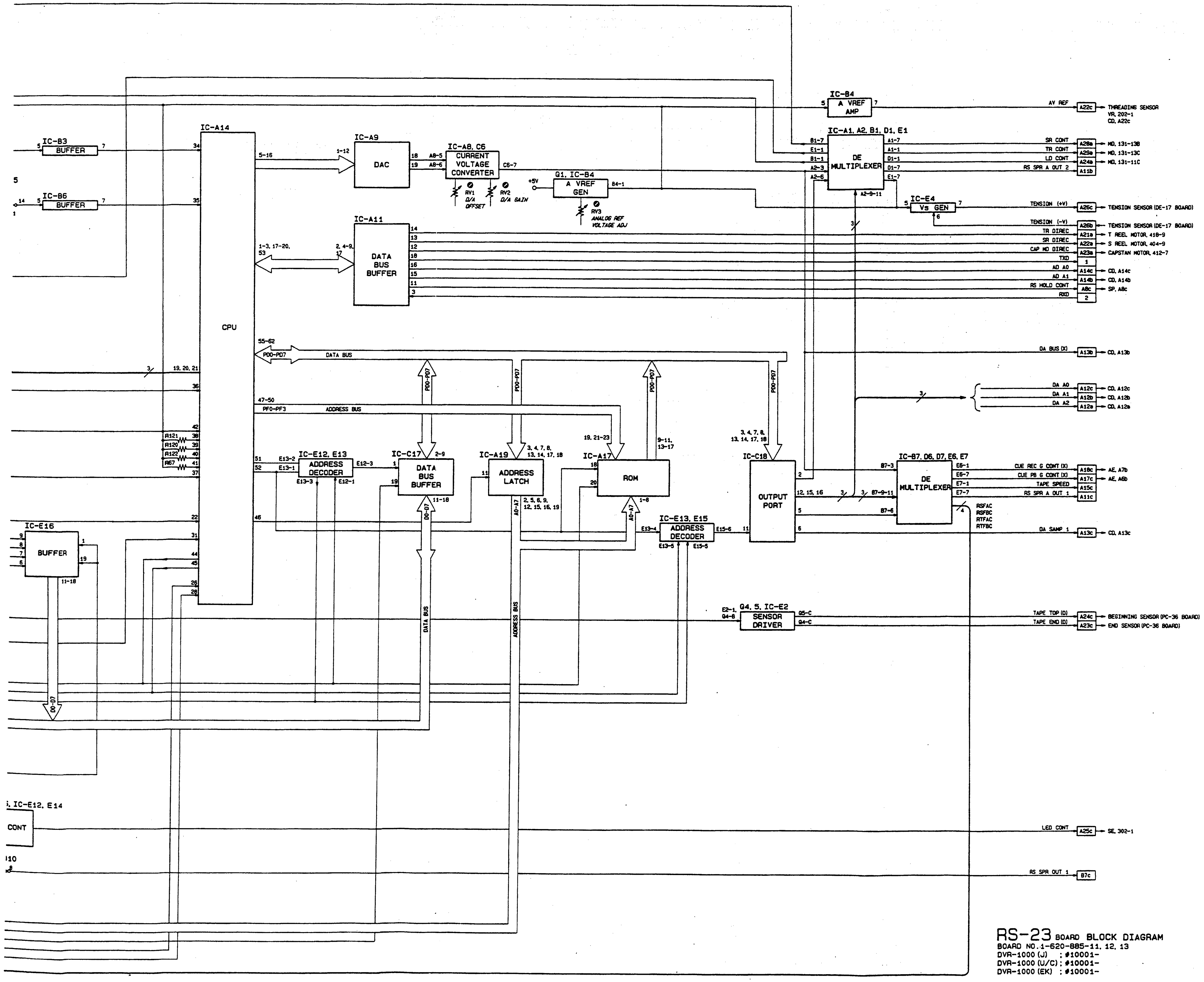

CAPSTAN MOTOR, 412-2
A29c
CP FG A
CAPSTAN MOTOR, 412-3
A29b
CP FG B
IC-C3
AMP
IC-B3
COMPARATOR
TP3
TP4
IC-D5
RS, A13b
RS, A12c
RS, A12b
RS, A12a
A13b
A12c
A12b
A12a
DA BUS (X)
DA A0
DA A1
DA A2
RS, A13c
A13c
DA SAMP 1
VR, 202-3
RS, A22c
A22b
A22c
TRACKING CONT
AV REF
R20
R21
R71, 73-75, 113
POWER
MONITOR
RS, A14c
RS, A14b
A14c
A14b
AD A0
AD A1
DRUM MOTOR, 421-4
A27c
DRUM FG A
IC-C4
AMP
IC-B4
COMPARATOR
IC-B6
DRUM MOTOR, 421-5
A27b
DRUM FG B
TP5
DRUM FG SEL
DRUM MOTOR, 421-2
A26c
DRUM PG (X)
IC-D4
COMPARATOR
TP6
IC-D11, D12
SP, B16c
B16c
SV CK
D11-5
CLOCK
COUNTER
D11-6
D12-9
D12-7
D12-6
D12-5
D12-2
7.3MHz
3.6MHz
1.8MHz
0.9MHz
0.4MHz
0.1MHz
IC-D11
SP, B10c
B10c
SV REF
IC-C14 GATE0
REC CTL
CODE CK GEN.
IC-C14
GATE2
TRACKING
DELAY
1.8MHz
IC-C16, C17,
D11, D19
C17-10
D11-11
CTL CODE
COUNTER
IC-A19, C16, D6,
D14, D16, D17
D17-9
PR, 922-5
SP, B11a
SP, B11b
B10b
B11a
B11b
REF AF
SV FRAME
SEL CF
D6-9
D6-12, A19-9
D14-9
1-2-4 REF
FRAME
COUNTER
D14-11
REF CF ENABLE
AE, B4a
B4a
CTL PB
A13-1, 2
IC-A13, A14
EDGE
DETECTOR
A14-6
A14-8, 11
IC-B19, C15, C16
B19-1, 2
SHIFT
REGISTER
C16-1
IC-B16, C15, C16
C15-1, 2
REF POINT
SEP.
B16-6
C16-11
B16-9
C15-3
IC-C14
GATE1
WINDOW
PULSE GEN.
TP9
IC-B12, C
C10-C12,
CT
SP, B14a
SP, B13a
B14a
B13a
CD RD
CD WR
RS, A7a/SP, A7a
RS, A6c/SP, A6c
RS, A6b/SP, A6b
RS, A6a/SP, A6a
RS, A5c/SP, A5c
RS, A5b/SP, A5b
RS, A5a/SP, A5a
RS, A4c/SP, A4c
A7a
A6c
A6b
A6a
A5c
A5b
A5a
A4c
SV A0
SV A1
SV A2
SV A3
SV A4
SV A5
SV A6
SV A7
IC-D7-D9
D8-5
D7-5
ADDRESS
DECODER


IC-B3
COMPARATOR
TP3
TP4
IC-A5, B7, C6, C7
SAMPLE TIMING GEN.
IC-B6
EDGE, EXOR, DIRECTION DETECTOR
IC-B7, C8GATE1
RAMP CONTROLLER
D4, Q2
RAMP GEN.
IC-B2
SAMPLE HOLD
IC-A1
AMP
TP2
IC-A5
CAPS SW
IC-A1
AMP
CP CONT
A29a
MD, 137-11a
IC-C8GATE0
CAPSTAN FG COUNT
IC-B1
BUFFER
IC-D3
BUFFER
AU MONI R G CONT
A17b
TR, 902-1
AU MONI L G CONT
A17c
TR, 902-2
IC-C11GATE2
CAPS ROT. MS. PRS.
IC-C10GATEB, D6
CAPS ROT. MS.
C33, R45, 46, IC-D6
L.P.F.
C34, R47, 48, IC-D6
L.P.F.
IC-C5
IC-B5
BUFFER
AD A BUS1
A15b
RS, A15b
AD A BUS2
A15a
RS, A15a
R20
R21
R71, 73-75, 113
POWER MONITOR
IC-B4
COMPARATOR
IC-B6
EXOR. DIRECTION DETECTOR
DM DIR
IC-B7, C8GATE2
RAMP CONTROLLER
D2, Q1
RAMP GEN.
IC-A3
SAMPLE HOLD
IC-A2
AMP
TP1
IC-A4
DM SW
IC-A2
AMP
DM CONT
A27a
MD, 131-13a
IC-C2
LIMITER
TP5
IC-A4, B7, C6, C7
SAMPLE TIMING GEN.
IC-A14
DRUM FG SEL
TP7
TP6
IC-D4
COMPARATOR
IC-C11GATE0
PG DELAY1
IC-C11GATE1
PG DELAY2
IC-D14
PG PULSE GEN.
IC-D11, D12
CLOCK COUNTER
7.3MHz
3.6MHz
1.8MHz
0.9MHz
0.4MHz
0.1MHz
IC-C12
ENV SAMP 1, 2
ENV SAMP 1
ENV SAMP 2
B8c
B8b
RS, B8c
RS, B8b
IC-C10GATEA
DRUM PHASE COUNTER
IC-D11
IC-C14GATE0
REC CTL CODE CK GEN.
CAPS DIR
IC-B12GATEB
PB FRAME PHASE DET.
IC-C16, C17, D11, D19
CTL CODE COUNTER
IC-D11, D18, D20
CTL GEN.
FR, 2FR, 4FR
IC-A5
REC CTL ENABLE
IC-C2
BUFFER
CTL REC (X)
B5b
AE, B5b
IC-B12GATEA
CAPSTAN PHASE COUNTER
2-4 REF FRAME COUNTER
CF ENABLE
IC-A16, A18-A20
PB FRAME PULSE GEN.
TP8
CTL GEN.
IC-D13
OUTPUT BUFFER
PG PULSE
CP PULSE
CP DIR
PB FRAME PULSE
PB AF
PB CF
B9a
B11c
B12c
B4b
B9b
B9c
RF, B14c
RS, B4b/SY, B4b
PR, 922-3
PR, 922-4
IC-B19, C15, C16
SHIFT REGISTER
IC-A20, A21, B20
PB CTL DECODER
FWD/REV
IC-B16, C15, C16
REF POINT SEP.
IC-A19, B18
PB FRAME COUNTER
2FR
4FR
FRAME COUNTER
525/625
IC-B15
IC-C14
WINDOW PULSE GEN.
TP9
IC-C12
PB CTL PULSE COUNTER
IC-B12, C8, C10-C12, C14
CTC
IC-B10
I PORT
FR, 2FR, 4FR
FRAME COUNTER
DM DIR
CAPS DIR
IC-B11
I PORT
HARD VERSION
IC-B8
O PORT
DRUM FG SEL
REF CF ENABLE
525/625
IC-B9
O PORT
FWD/REV
REC CTL ENABLE
CAPS SW
DM SW
DATA BUS
IC-D10
DATA BUS BUFFER
CO RD
SV D0
SV D1
SV D2
SV D3
SV D4
SV D5
SV D6
SV D7
A4b
A4a
A3c
A3b
A3a
A2c
A2b
A2a
IF-138, 801-9B/RS, A4b/SP, A4b
IF-138, 801-9A/RS, A4a/SP, A4a
IF-138, 801-8B/RS, A3c/SP, A3c
IF-138, 801-8A/RS, A3b/SP, A3b
IF-138, 801-7B/RS, A3a/SP, A3a
IF-138, 801-7A/RS, A2c/SP, A2c
IF-138, 801-6B/RS, A2b/SP, A2b
IF-138, 801-6A/RS, A2a/SP, A2a

CD-35 BOARD BLOCK DIAGRAM
BOARD NO. 1-620-884-11, 12
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

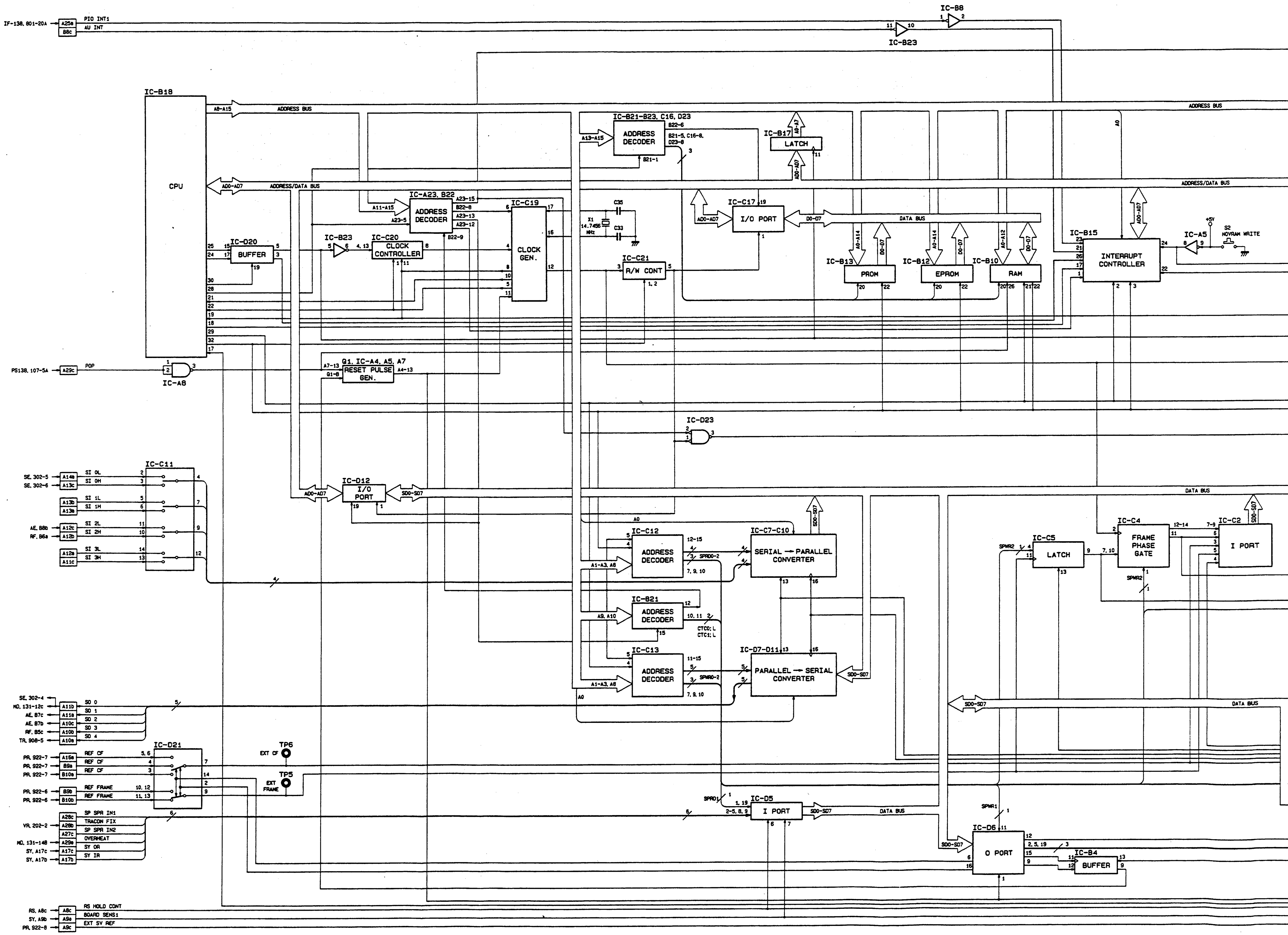
RS-23 BOARD : Reel Servo
CS-27 BOARD : Auto Tracking

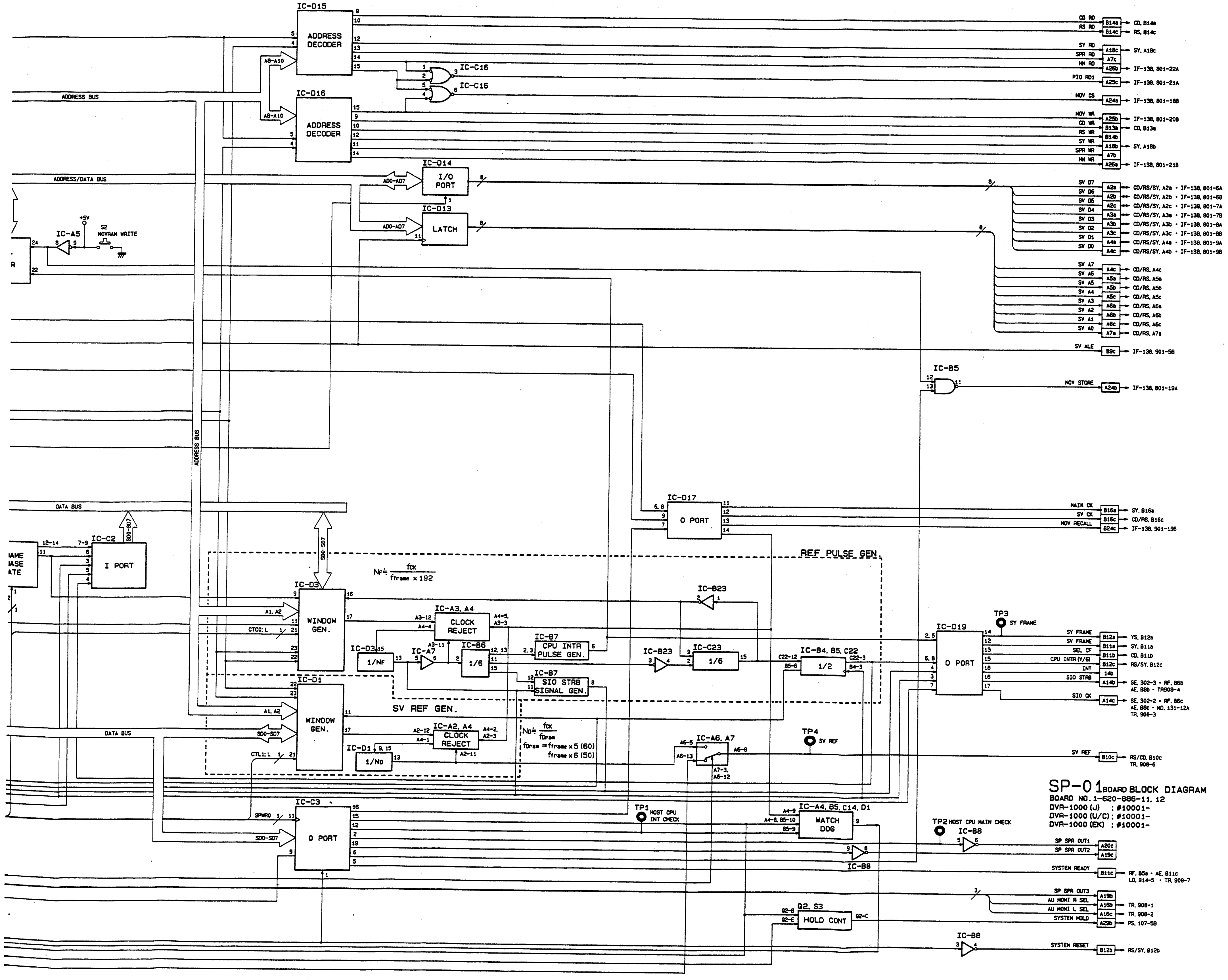

TENSION SENSOR INTERFACE
TENSION SENSOR (DE-17 BOARD) A27b TENSION (Y)
TENSION SENSOR (DE-17 BOARD) A27c TENSION (X)
IC-E4 DIFFERENTIAL AMP
R85
IC-D2 DC OFFSET AMP
C37, R76, 77 PHASE COMPENSATION
IC-D2 COMPARATOR
D8-10 LIMITER
C83, R191, 193 FILTER
IC-B2 AMP
C82, R192 FILTER
R190
BEGINNING SENSOR (PC-36 BOARD) A24b TAPE TOP (E)
SY, A20c A19a SY BAT CHK
IF138, 801-22B A20a HM BAT CHK
C60, D1, R90, IC-D4 TOP SENSOR INTERFACE
END SENSOR (PC-36 BOARD) A23b TAPE END (E)
MD, 131-11B A27a MADE TEMP
A22b DEW
CD, A15b A15b AD A BUS1
CD, A15a A15a AD A BUS2
C42, D2, R95, IC-D4 END SENSOR INTERFACE
IC-A3 MULTIPLEXER
R58 R16
IC-A4 MULTIPLEXER
IC-B3 BUFFER
R81 R82
IC-B6 BUFFER
IC-C5
RF, B9c A20c A CH ENV
RF, B10c A20b B CH ENV
RF, B11c A19c C CH ENV
RF, B12c A19b D CH ENV
IC-E5
IC-C5
IC-B5 BUFFER
CN1 IC1 AUTO TRACKING CN2
CS-27 BOARD
CD, B8b B8b ENV SAMP2
CD, B8c B8c ENV SAMP1
VR, 202-4 A18a AU MONI L VR
MD, 131-10A A25a LD MD CURRENT
AE, A5b A16c AUX METER (X)
IC-A6 MULTIPLEXER
IC-A7 BUFFER
IC-B2 BUFFER
IC-A5 MULTIPLEXER
IC-A7 BUFFER
SB, TB
SATA
S REEL MOTOR
PHASE DETECTOR
T REEL MOTOR
PHASE DETECTOR
THREADING SENSOR A25b THREAD POSI
SE, 302-7 A16a RS SPR A IN
VR, 202-5 A17a AU MONI R VR
A29c SR FG A
A29b SR FG B
A28c TR FG A
A28b TR FG B
IC-D3, E2, E3 FG INTERFACE
SA, SB, TA, TB
IC-D13 DIRECTION DETECTOR
SA, SB, TA, TB
IC-E2
IC-A12 TIME COUNTER
IC-D12, E12 TIMER RESET
IC-E16 BUFFER
S1 S2
SP, B16c B16c SV CK
IC-D10
IC-D9 CLOCK COUNTER
SP, B14b B14b RS WR
SP, B14c B14c RS RD
CD, B4b B4b PB FRAME PULSE
IF138, 801-9B CD/SP/SY, A4b A4b SV D0
IF138, 801-9A CD/SP/SY, A4a A4a SV D1
IF138, 801-8B CD/SP/SY, A3c A3c SV D2
IF138, 801-8A CD/SP/SY, A3b A3b SV D3
IF138, 801-7B CD/SP/SY, A3a A3a SV D4
IF138, 801-7A CD/SP/SY, A2c A2c SV D5
IF138, 801-6B CD/SP/SY, A2b A2b SV D6
IF138, 801-6A CD/SP/SY, A2a A2a SV D7
DATA BUS
IC-E8 DATA BUS BUFFER
D0-D7
IC-E11
IC-D8, E12-E15 ADDRESS DECODER
D0-D7
DATA BUS
IC-E17 OUTPUT PORT
Q2, 3, 6, IC-E12, E14 LED CONT
IC-D10
SP, A7a A7a SV A0
SP, A6c A6c SV A1
SP, A6b A6b SV A2
SP, A6a A6a SV A3
SP, A5c A5c SV A4
SP, A5b A5b SV A5
SP, A5a A5a SV A6
SP, A4c A4c SV A7
ADDRESS BUS
IC-E9, E10 ADDRESS SELECTOR
A0-A7
ADDRESS BUS
IC-C11 RAM
ADDRESS BUS
SP, B12c B12c CPU INTERRUPT
SP, B12b B12b SYSTEM RESET
IC-D10
IC-D8


IC-B3
BUFFER
IC-B6
BUFFER
5
IC-A14
CPU
IC-A9
DAC
5-16
1-12
IC-A8, C6
CURRENT VOLTAGE CONVERTER
A8-5
A8-6
C6-7
RV1 D/A OFFSET
RV2 D/A GAIN
+5V
Q1, IC-B4
A VREF GEN
B4-1
RV3 ANALOG REF VOLTAGE ADJ
IC-A11
DATA BUS BUFFER
1-3, 17-20, 53
2, 4-9, 17
IC-B4
A VREF AMP
IC-A1, A2, B1, D1, E1
DE MULTIPLEXER
B1-7
E1-1
B1-1
A2-3
A2-6
A1-7
A1-1
D1-1
D1-7
E1-7
A2-9-11
IC-E4
Vs GEN
AV REF
A22c
THREADING SENSOR VR, 202-1 CD, A22c
SR CONT
A28a
MD, 131-13B
TR CONT
A29a
MD, 131-13C
LD CONT
A24a
MD, 131-11C
RS SPR A OUT 2
A11b
TENSION (+V)
A26c
TENSION SENSOR (DE-17 BOARD)
TENSION (-V)
A26b
TENSION SENSOR (DE-17 BOARD)
TR DIREC
A21a
T REEL MOTOR, 418-9
SR DIREC
A22a
S REEL MOTOR, 404-9
CAP MD DIREC
A23a
CAPSTAN MOTOR, 412-7
TXD
1
AD A0
A14c
CD, A14c
AD A1
A14b
CD, A14b
RS HOLD CONT
A8c
SP, A8c
RXD
2
55-62
PD0-PD7
DATA BUS
DA BUS (X)
A13b
CD, A13b
DA A0
A12c
CD, A12c
DA A1
A12b
CD, A12b
DA A2
A12a
CD, A12a
47-50
PF0-PF3
ADDRESS BUS
R121
R120
R122
R67
IC-E12, E13
ADDRESS DECODER
E13-2
E13-1
E12-3
E13-3
E12-1
IC-C17
DATA BUS BUFFER
2-9
11-18
D0-D7
IC-A19
ADDRESS LATCH
3, 4, 7, 8, 13, 14, 17, 18
2, 5, 6, 9, 12, 15, 16, 19
A0-A7
IC-A17
ROM
19, 21-23
9-11, 13-17
1-8
IC-E13, E15
ADDRESS DECODER
E13-4
E15-6
E13-5
E15-5
IC-C18
OUTPUT PORT
3, 4, 7, 8, 13, 14, 17, 18
12, 15, 16
IC-B7, D6, D7, E6, E7
DE MULTIPLEXER
B7-3
B7-9-11
B7-6
E6-1
E6-7
E7-1
E7-7
CUE REC G CONT (X)
A18c
AE, A7b
CUE PB G CONT (X)
A17c
AE, A6b
TAPE SPEED
A15c
RS SPR A OUT 1
A11c
RSFAC
RSFBC
RTFAC
RTFBC
DA SAMP 1
A13c
CD, A13c
IC-E16
BUFFER
11-18
D0-D7
DATA BUS
ADDRESS BUS
E2-1, Q4-B
Q4, 5, IC-E2
SENSOR DRIVER
Q5-C
Q4-C
TAPE TOP (D)
A24c
BEGINNING SENSOR (PC-36 BOARD)
TAPE END (D)
A23c
END SENSOR (PC-36 BOARD)
, IC-E12, E14
CONT
10
LED CONT
A25c
SE, 302-1
RS SPR OUT 1
B7c

RS-23 BOARD BLOCK DIAGRAM
BOARD NO.1-620-885-11, 12, 13
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

SP-01 BOARD
Servo Processor

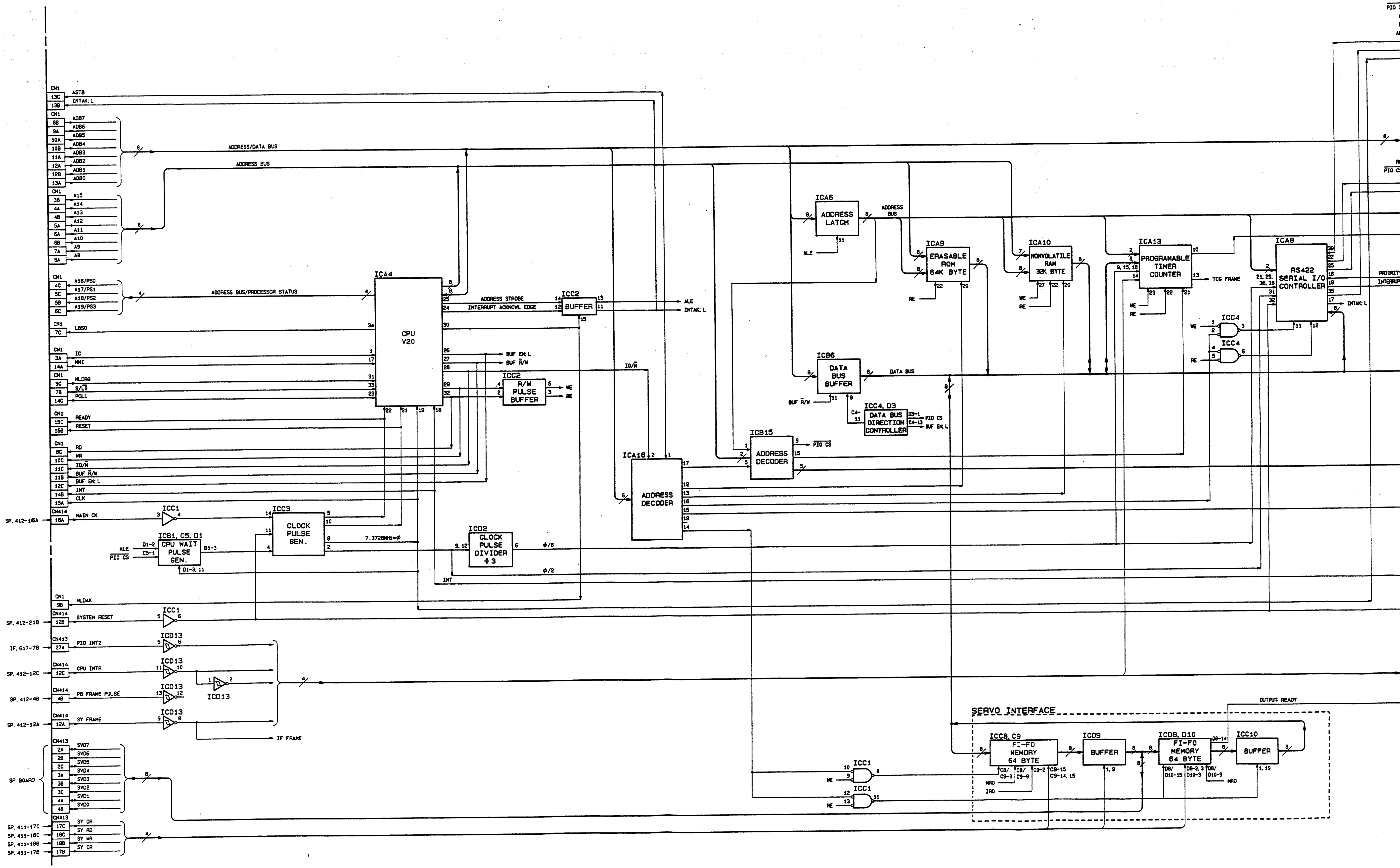

IC-B18
CPU
ADDRESS BUS
A8-A15
AD0-AD7
ADDRESS/DATA BUS
IC-D20
BUFFER
IC-B23
IC-C20
CLOCK CONTROLLER
IC-A23, B22
ADDRESS DECODER
IC-C19
CLOCK GEN.
IC-B21-B23, C16, D23
ADDRESS DECODER
IC-B17
LATCH
IC-C17
I/O PORT
DATA BUS
X1 14.7456 MHz
C35
C33
IC-C21
R/W CONT
IC-B13
PROM
IC-B12
EPROM
IC-B10
RAM
IC-B15
INTERRUPT CONTROLLER
IC-A5
S2 NOVRAM WRITE
+5V
IC-B8
IF-138, 801-20A
PIO INT1
AU INT
PS138, 107-5A
POP
IC-A8
Q1, IC-A4, A5, A7
RESET PULSE GEN.
IC-D23
IC-C11
SI 0L
SI 0H
SI 1L
SI 1H
SI 2L
SI 2H
SI 3L
SI 3H
SE, 302-5
SE, 302-6
AE, 88b
RF, 86a
IC-D12
I/O PORT
SD0-SD7
IC-C12
ADDRESS DECODER
IC-C7-C10
SERIAL → PARALLEL CONVERTER
IC-B21
ADDRESS DECODER
CTC0; L
CTC1; L
IC-C13
ADDRESS DECODER
IC-D7-D11
PARALLEL → SERIAL CONVERTER
SPRD0-2
SPWR0-2
A1-A3, A8
A9, A10
A0
SE, 302-4
MO, 131-12c
AE, 87c
AE, 87b
RF, 85c
TR, 908-5
SO 0
SO 1
SO 2
SO 3
SO 4
IC-D21
PR, 922-7
PR, 922-6
REF CF
REF FRAME
TP6
EXT CF
TP5
EXT FRAME
VR, 202-2
MO, 131-14B
SY, A17c
SY, A17b
SP SPR IN1
TRACON FIX
SP SPR IN2
OVERHEAT
SY OR
SY IR
IC-D5
I PORT
IC-D6
O PORT
IC-B4
BUFFER
SPRD1
SPWR1
SPWR2
IC-C5
LATCH
IC-C4
FRAME PHASE GATE
IC-C2
I PORT
RS, A8c
SY, A9b
PR, 922-8
RS HOLD CONT
BOARD SENS1
EXT SV REF

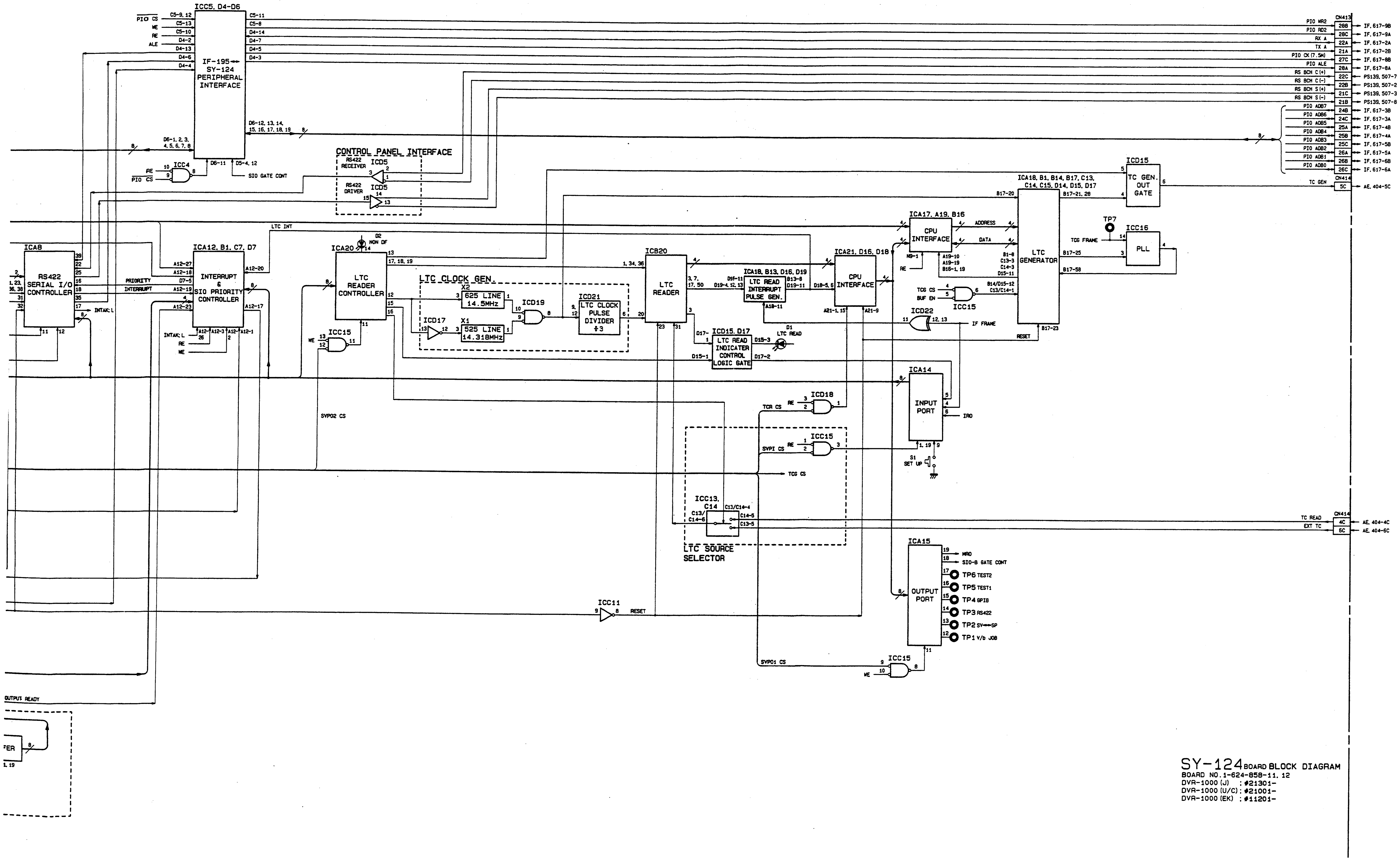

IC-D15
ADDRESS DECODER
A8-A10
IC-D16
ADDRESS DECODER
A8-A10
IC-C16
IC-C16
ADDRESS BUS
ADDRESS/DATA BUS
IC-D14
I/O PORT
AD0-AD7
IC-D13
LATCH
AD0-AD7
IC-A5
+5V
S2
NOVRAM WRITE
CD RD
RS RD
B14a
B14c
CD, B14a
RS, B14c
SY RD
SPR RD
HM RD
A18c
A7c
A26b
SY, A18c
IF-138, 801-22A
PIO RD1
A25c
IF-138, 801-21A
NOV CS
A24a
IF-138, 801-18B
NOV WR
CD WR
RS WR
SY WR
SPR WR
HM WR
A25b
B13a
B14b
A18b
A7b
A26a
IF-138, 801-20B
CD, B13a
SY, A18b
IF-138, 801-21B
SV D7
SV D6
SV D5
SV D4
SV D3
SV D2
SV D1
SV D0
A2a
A2b
A2c
A3a
A3b
A3c
A4a
A4c
CD/RS/SY, A2a · IF-138, 801-6A
CD/RS/SY, A2b · IF-138, 801-6B
CD/RS/SY, A2c · IF-138, 801-7A
CD/RS/SY, A3a · IF-138, 801-7B
CD/RS/SY, A3b · IF-138, 801-8A
CD/RS/SY, A3c · IF-138, 801-8B
CD/RS/SY, A4a · IF-138, 801-9A
CD/RS/SY, A4b · IF-138, 801-9B
SV A7
SV A6
SV A5
SV A4
SV A3
SV A2
SV A1
SV A0
A4c
A5a
A5b
A5c
A6a
A6b
A6c
A7a
CD/RS, A4c
CD/RS, A5a
CD/RS, A5b
CD/RS, A5c
CD/RS, A6a
CD/RS, A6b
CD/RS, A6c
CD/RS, A7a
SV ALE
B9c
IF-138, 901-5B
IC-B5
NOV STORE
A24b
IF-138, 801-19A
ADDRESS BUS
DATA BUS
IC-D17
O PORT
MAIN CK
SV CK
NOV RECALL
B16a
B16c
B24c
SY, B16a
CD/RS, B16c
IF-138, 901-19B
IC-C2
I PORT
S00-S07
REF PULSE GEN.
NF ≒ fcx / fframe x 192
IC-D3
WINDOW GEN.
A1, A2
CTC0; L
S00-S07
IC-A3, A4
CLOCK REJECT
IC-B23
IC-B7
CPU INTR PULSE GEN.
IC-D3
1/NF
IC-A7
IC-B6
1/6
IC-B7
SIO STRB SIGNAL GEN.
IC-B23
IC-C23
1/6
IC-B4, B5, C22
1/2
IC-D19
O PORT
TP3
SY FRAME
SY FRAME
SV FRAME
SEL CF
CPU INTR (V/6)
INT
SIO STRB
B12a
B11a
B11b
B12c
14b
A14b
YS, B12a
SY, B11a
CD, B11b
RS/SY, B12c
SE, 302-3 · RF, B6b
AE, B8b · TR908-4
SIO CK
A14c
SE, 302-2 · RF, B6c
AE, B8c · MD, 131-12A
TR, 908-3
IC-D1
WINDOW GEN.
SV REF GEN.
A1, A2
S00-S07
CTL1; L
DATA BUS
IC-A2, A4
CLOCK REJECT
IC-D1
1/ND
ND ≒ fcx / fdram
fdram = fframe x 5 (60)
fframe x 6 (50)
IC-A6, A7
TP4
SV REF
SV REF
B10c
RS/CD, B10c
TR, 908-6
IC-C3
O PORT
SPWR0
S00-S07
TP1
HOST CPU INT CHECK
IC-A4, B5, C14, D1
WATCH DOG
IC-B8
TP2 HOST CPU MAIN CHECK
IC-B8
SP SPR OUT1
SP SPR OUT2
A20c
A19c
SYSTEM READY
B11c
RF, B5a · AE, B11c
LD, 914-5 · TR, 908-7
Q2, S3
HOLD CONT
SP SPR OUT3
AU MONI R SEL
AU MONI L SEL
SYSTEM HOLD
A19b
A16b
A16c
A29b
TR, 908-1
TR, 908-2
PS, 107-5B
IC-B8
SYSTEM RESET
B12b
RS/SY, B12b

SP-01 BOARD BLOCK DIAGRAM

BOARD NO. 1-620-886-11, 12
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

SY-124 BOARD
System Controller

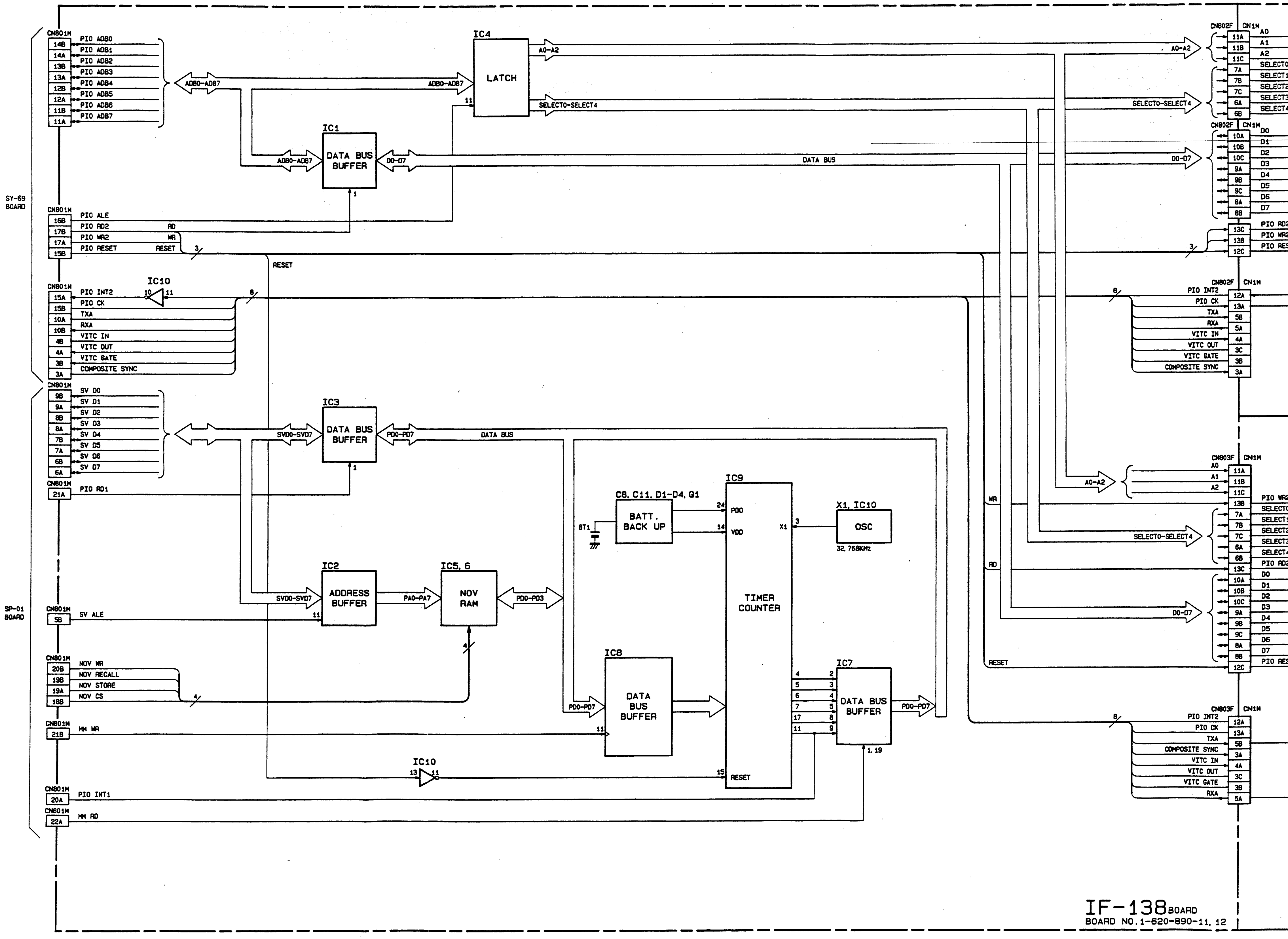

CN1
13C
13B
ASTB
INTAK: L
8B
9A
10A
10B
11A
12A
12B
13A
ADB7
ADB6
ADB5
ADB4
ADB3
ADB2
ADB1
ADB0
ADDRESS/DATA BUS
ADDRESS BUS
3B
4A
4B
5A
6A
6B
7A
8A
A15
A14
A13
A12
A11
A10
A9
A8
4C
5C
5B
6C
A16/PS0
A17/PS1
A18/PS2
A19/PS3
ADDRESS BUS/PROCESSOR STATUS
7C
LBS0
3A
14A
IC
NMI
9C
7B
14C
HLDRQ
S/LG
POLL
15C
15B
READY
RESET
8C
10C
11C
11B
12C
14B
15A
RD
WR
IO/M
BUF R/W
BUF EN: L
INT
CLK
CN414
16A
SP. 412-16A
MAIN CK
ICC1
ICC3
CLOCK PULSE GEN.
7.3728MHz=ϕ
ICB1, C5, D1
CPU WAIT PULSE GEN.
ALE
PIO CS
D1-2
C5-1
B1-3
D1-3, 11
ICA4
CPU V20
ADDRESS STROBE
INTERRUPT ACKNOWL EDGE
ICC2
BUFFER
ALE
INTAK: L
BUF EN: L
BUF R/W
IO/M
ICC2
R/W PULSE BUFFER
WE
RE
ICD2
CLOCK PULSE DIVIDER ÷3
ϕ/6
ϕ/2
INT
ICA16
ADDRESS DECODER
ICB15
ADDRESS DECODER
PIO CS
ICA6
ADDRESS LATCH
ADDRESS BUS
ICB6
DATA BUS BUFFER
DATA BUS
BUF R/W
ICC4, D3
DATA BUS DIRECTION CONTROLLER
D3-1
C4-13
C4-11
PIO CS
BUF EN: L
ICA9
ERASABLE ROM 64K BYTE
ICA10
NONVOLATILE RAM 32K BYTE
ICA13
PROGRAMABLE TIMER COUNTER
TCG FRAME
ICA8
RS422 SERIAL I/O CONTROLLER
INTAK: L
ICC4
CN1
9B
HLDAK
CN414
12B
SP. 412-21B
SYSTEM RESET
CN413
27A
IF. 617-7B
PIO INT2
ICD13
CN414
12C
SP. 412-12C
CPU INTR
4B
SP. 412-4B
PB FRAME PULSE
12A
SP. 412-12A
SY FRAME
IF FRAME
SP BOARD
2A
2B
2C
3A
3B
3C
4A
4B
SVD7
SVD6
SVD5
SVD4
SVD3
SVD2
SVD1
SVD0
17C
18C
18B
17B
SP. 411-17C
SP. 411-18C
SP. 411-18B
SP. 411-17B
SY OR
SY RD
SY WR
SY IR
ICC1
SERVO INTERFACE
ICC8, C9
FI-FO MEMORY 64 BYTE
C8/C9-3
C8/C9-9
C9-2
C8-15 C9-14, 15
MRO
IRO
ICD9
BUFFER
ICD8, D10
FI-FO MEMORY 64 BYTE
D8/D10-15
D8-2, 3 D10-3
D8/D10-9
D8-14
ICC10
BUFFER
OUTPUT READY

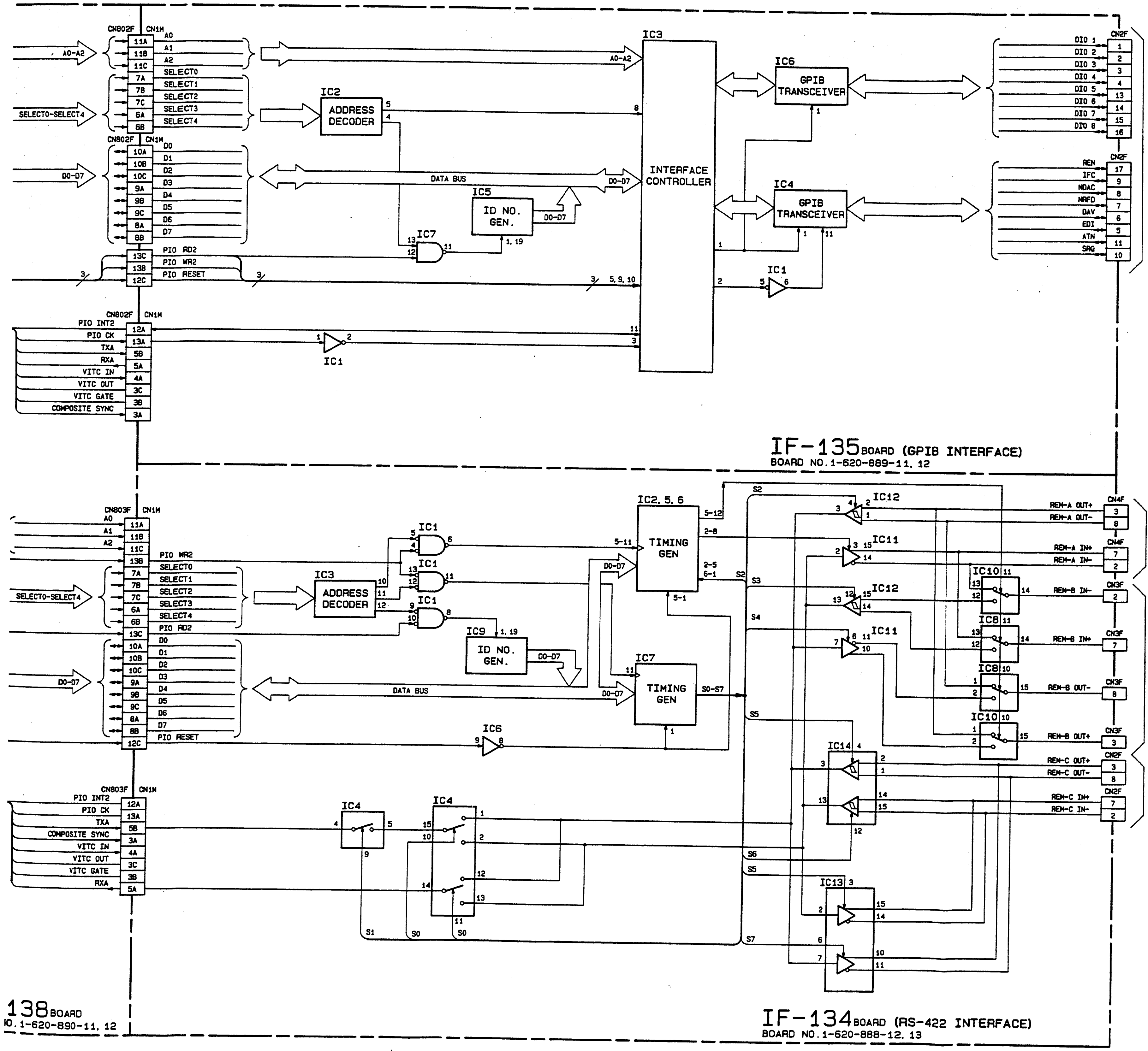

ICC5, D4-D6
IF-195↔SY-124 PERIPHERAL INTERFACE
PIO CS
WE
RE
ALE
ICC4
SIO GATE CONT
CONTROL PANEL INTERFACE
RS422 RECEIVER
ICD5
RS422 DRIVER
ICA8
RS422 SERIAL I/O CONTROLLER
ICA12, B1, C7, D7
INTERRUPT & SIO PRIORITY CONTROLLER
PRIORITY
INTERRUPT
INTAK: L
LTC INT
ICA20
D2 NON DF
LTC READER CONTROLLER
ICC15
SVPO2 CS
LTC CLOCK GEN.
X2
625 LINE 14.5MHz
ICD17
X1
525 LINE 14.318MHz
ICD19
ICD21
LTC CLOCK PULSE DIVIDER ÷3
ICB20
LTC READER
ICA18, B13, D16, D19
LTC READ INTERRUPT PULSE GEN.
ICD15, D17
LTC READ INDICATER CONTROL LOGIC GATE
D1 LTC READ
ICA21, D16, D18
CPU INTERFACE
ICA17, A19, B16
CPU INTERFACE
ADDRESS
DATA
ICA18, B1, B14, B17, C13, C14, C15, D14, D15, D17
LTC GENERATOR
ICD15
TC GEN. OUT GATE
TP7
ICC16
PLL
TCG FRAME
TCG CS
BUF EN
ICC15
ICD22
IF FRAME
RESET
ICA14
INPUT PORT
IRQ
S1 SET UP
ICD18
TCR CS
SVP1 CS
TCG CS
ICC13, C14
LTC SOURCE SELECTOR
TC READ
EXT TC
CN414
AE, 404-4C
AE, 404-6C
AE, 404-5C
TC GEN
CN413
PIO WR2
PIO RD2
RX A
TX A
PIO CK (7.5M)
PIO ALE
RS BCH C (+)
RS BCH C (-)
RS BCH S (+)
RS BCH S (-)
PIO ADB7
PIO ADB6
PIO ADB5
PIO ADB4
PIO ADB3
PIO ADB2
PIO ADB1
PIO ADB0
IF, 617-9B
IF, 617-9A
IF, 617-2A
IF, 617-2B
IF, 617-8B
IF, 617-8A
PS139, 507-7
PS139, 507-2
PS139, 507-3
PS139, 507-8
IF, 617-3B
IF, 617-3A
IF, 617-4B
IF, 617-4A
IF, 617-5B
IF, 617-5A
IF, 617-6B
IF, 617-6A
ICA15
OUTPUT PORT
NRO
SIO-B GATE CONT
TP6 TEST2
TP5 TEST1
TP4 GPIB
TP3 RS422
TP2 SV↔SP
TP1 V/b JOB
ICC11
RESET
SVPO1 CS
ICC15
OUTPUT READY
FER

SY-124 BOARD BLOCK DIAGRAM
BOARD NO.1-624-858-11, 12
DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

INTERFACE

IF-134 BOARD : RS-422 Interface Board
IF-135 BOARD : GP-IB Interface Board
IF-138 BOARD : Interface Mother Board


SY-69 BOARD
SP-01 BOARD
CN801M
PIO AD80
PIO AD81
PIO AD82
PIO AD83
PIO AD84
PIO AD85
PIO AD86
PIO AD87
AD80-AD87
IC4
LATCH
A0-A2
SELECT0-SELECT4
IC1
DATA BUS BUFFER
D0-D7
DATA BUS
PIO ALE
PIO RD2
PIO WR2
PIO RESET
RD
WR
RESET
IC10
PIO INT2
PIO CK
TXA
RXA
VITC IN
VITC OUT
VITC GATE
COMPOSITE SYNC
SV D0
SV D1
SV D2
SV D3
SV D4
SV D5
SV D6
SV D7
IC3
DATA BUS BUFFER
SVD0-SVD7
PD0-PD7
PIO RD1
IC2
ADDRESS BUFFER
PA0-PA7
IC5, 6
NOV RAM
PD0-PD3
SV ALE
NOV WR
NOV RECALL
NOV STORE
NOV CS
HM WR
PIO INT1
HM RD
C8, C11, D1-D4, Q1
BATT. BACK UP
BT1
IC9
PDO
VDD
X1
TIMER COUNTER
RESET
X1, IC10
OSC
32.768KHz
IC8
DATA BUS BUFFER
IC7
DATA BUS BUFFER
1, 19
CN802F
CN1M
CN803F
A0
A1
A2
SELECT0
SELECT1
SELECT2
SELECT3
SELECT4
D0
D1
D2
D3
D4
D5
D6
D7
PIO RD2
PIO WR2
PIO RESET
WR
RD
RESET
IF-138 BOARD
BOARD NO. 1-620-890-11, 12

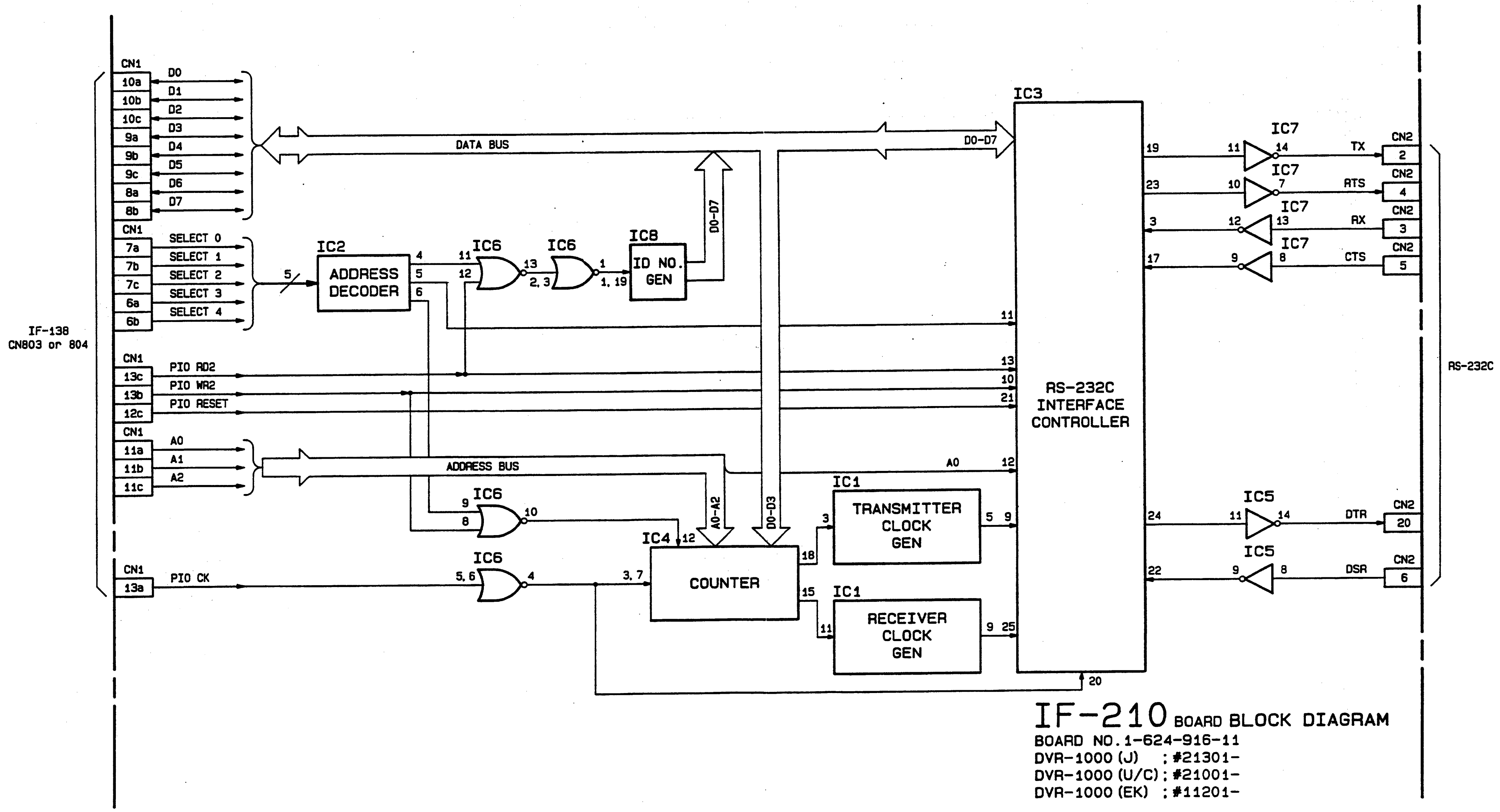

CN802F
CN1M
A0-A2
SELECT0-SELECT4
D0-D7
IC2
ADDRESS DECODER
IC3
INTERFACE CONTROLLER
IC6
GPIB TRANSCEIVER
IC4
GPIB TRANSCEIVER
IC5
ID NO. GEN.
IC7
IC1
DATA BUS
PIO RD2
PIO WR2
PIO RESET
PIO INT2
PIO CK
TXA
RXA
VITC IN
VITC OUT
VITC GATE
COMPOSITE SYNC
DIO 1
DIO 2
DIO 3
DIO 4
DIO 5
DIO 6
DIO 7
DIO 8
REN
IFC
NDAC
NRFD
DAV
EOI
ATN
SRQ
CN2F
TO DVPC-1000
IF-135 BOARD (GPIB INTERFACE)
BOARD NO. 1-620-889-11, 12
CN803F
IC2, 5, 6
TIMING GEN
IC7
TIMING GEN
IC9
ID NO. GEN.
IC12
IC11
IC10
IC8
IC14
IC13
S0-S7
REM-A OUT+
REM-A OUT-
REM-A IN+
REM-A IN-
REM-B IN-
REM-B IN+
REM-B OUT-
REM-B OUT+
REM-C OUT+
REM-C OUT-
REM-C IN+
REM-C IN-
CN4F
CN3F
RS-422 IN
RS-422 OUT
RS-422 IN/OUT
138 BOARD
1-620-890-11, 12
IF-134 BOARD (RS-422 INTERFACE)
BOARD NO. 1-620-888-12, 13

INTERFACE (RS-422/GPIB)

DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

INTERFACE

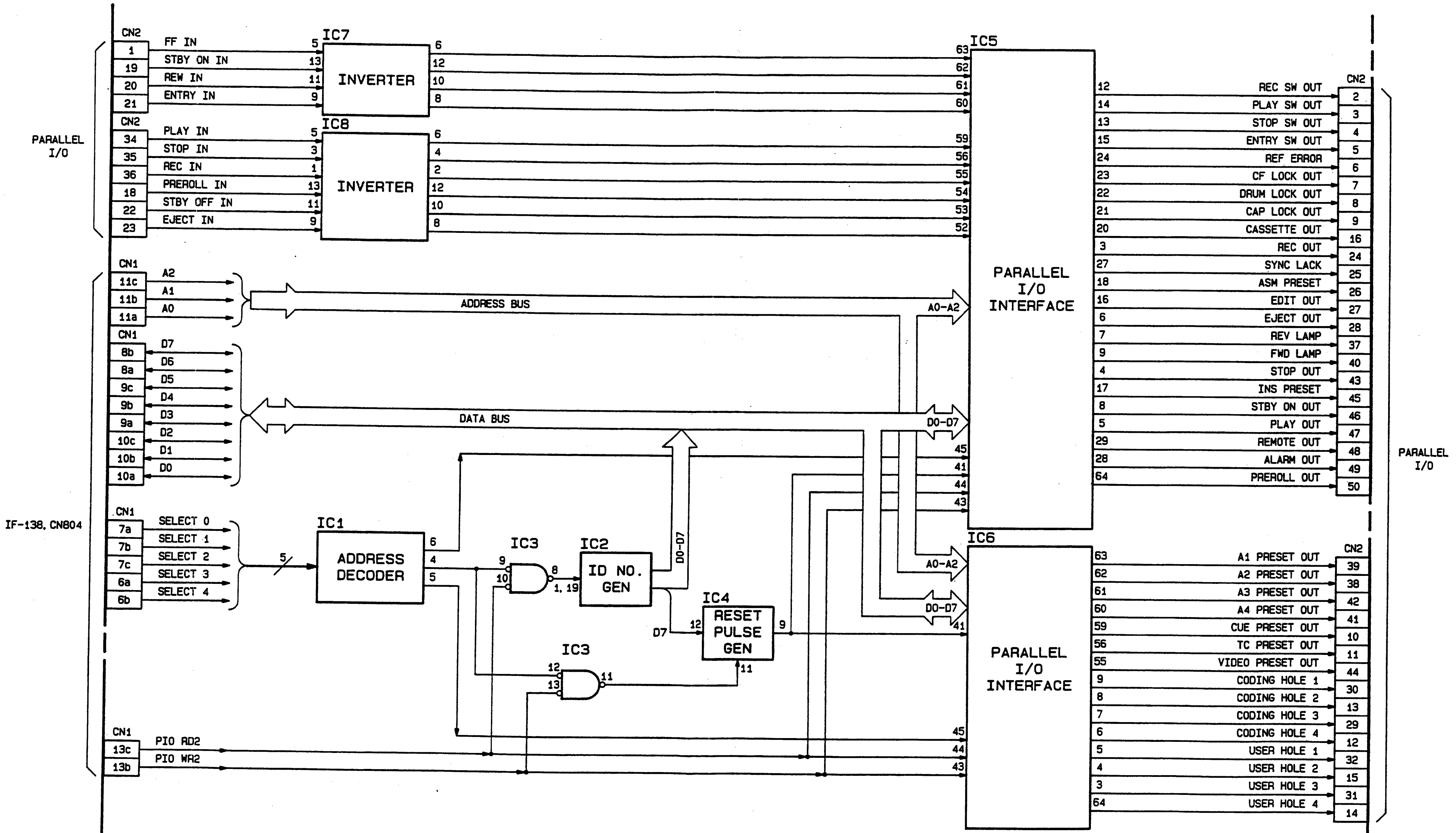
IF-210 BOARD ; RS-232C Interface Board


IF-138
CN803 or 804
CN1
10a
10b
10c
9a
9b
9c
8a
8b
D0
D1
D2
D3
D4
D5
D6
D7
DATA BUS
D0-D7
CN1
7a
7b
7c
6a
6b
SELECT 0
SELECT 1
SELECT 2
SELECT 3
SELECT 4
5
IC2
ADDRESS DECODER
4
5
6
IC6
11
12
13
IC6
2, 3
1
1, 19
IC8
ID NO. GEN
D0-D7
CN1
13c
13b
12c
PIO RD2
PIO WR2
PIO RESET
CN1
11a
11b
11c
A0
A1
A2
ADDRESS BUS
A0
IC6
9
8
10
IC4
12
A0-A2
D0-D3
COUNTER
CN1
13a
PIO CK
IC6
5, 6
4
3, 7
18
15
IC1
TRANSMITTER CLOCK GEN
3
5
9
IC1
RECEIVER CLOCK GEN
11
9
25
IC3
RS-232C INTERFACE CONTROLLER
11
13
10
21
12
20
19
23
3
17
24
22
IC7
11
14
TX
IC7
10
7
RTS
IC7
12
13
RX
IC7
9
8
CTS
IC5
11
14
DTR
IC5
9
8
DSR
CN2
2
CN2
4
CN2
3
CN2
5
CN2
20
CN2
6
RS-232C

IF-210 BOARD BLOCK DIAGRAM
BOARD NO. 1-624-916-11
DVR-1000 (J) ; #21301-
DVR-1000 (U/C) ; #21001-
DVR-1000 (EK) ; #11201-

INTERFACE

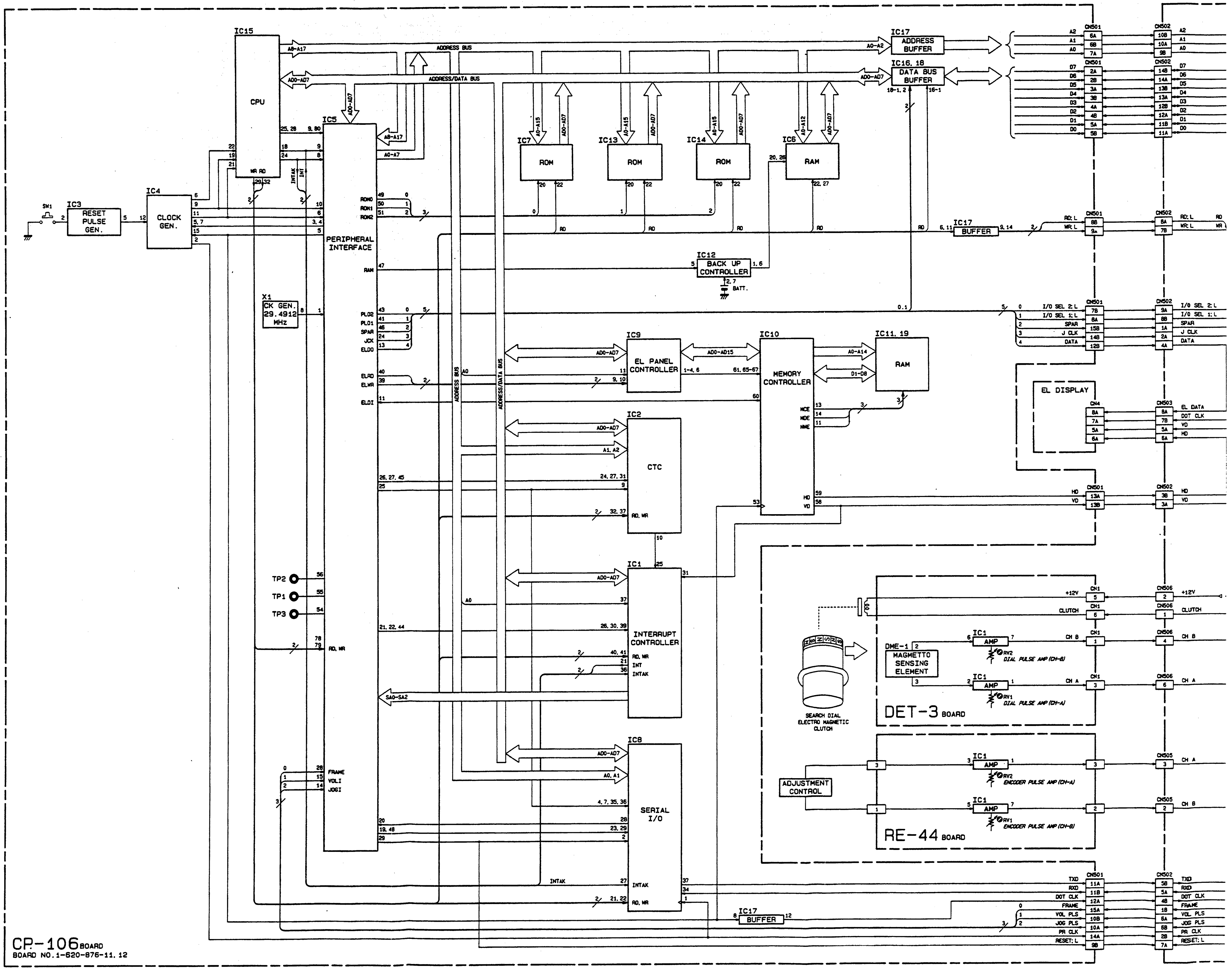
IF-221 BOARD : Parallel I/O Interface Board

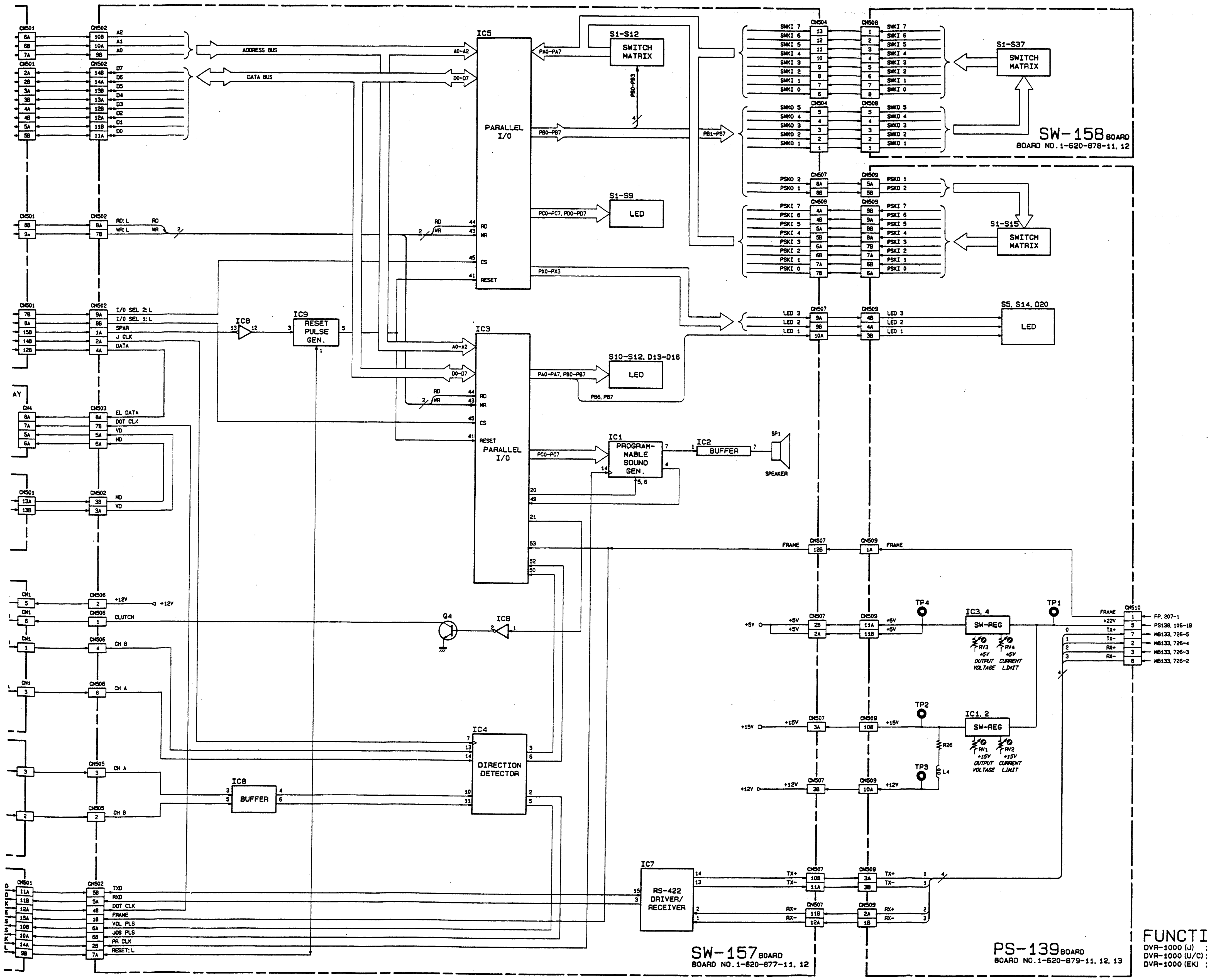

PARALLEL I/O
CN2
1 FF IN
19 STBY ON IN
20 REW IN
21 ENTRY IN
34 PLAY IN
35 STOP IN
36 REC IN
18 PREROLL IN
22 STBY OFF IN
23 EJECT IN
IC7 INVERTER
IC8 INVERTER
CN1
11c A2
11b A1
11a A0
ADDRESS BUS
A0-A2
8b D7
8a D6
9c D5
9b D4
9a D3
10c D2
10b D1
10a D0
DATA BUS
D0-D7
IF-138, CN804
7a SELECT 0
7b SELECT 1
7c SELECT 2
6a SELECT 3
6b SELECT 4
5
IC1 ADDRESS DECODER
IC3
IC2 ID NO. GEN
IC4 RESET PULSE GEN
D7
13c PIO RD2
13b PIO WR2
IC5 PARALLEL I/O INTERFACE
IC6 PARALLEL I/O INTERFACE
REC SW OUT
PLAY SW OUT
STOP SW OUT
ENTRY SW OUT
REF ERROR
CF LOCK OUT
DRUM LOCK OUT
CAP LOCK OUT
CASSETTE OUT
REC OUT
SYNC LACK
ASM PRESET
EDIT OUT
EJECT OUT
REV LAMP
FWD LAMP
STOP OUT
INS PRESET
STBY ON OUT
PLAY OUT
REMOTE OUT
ALARM OUT
PREROLL OUT
A1 PRESET OUT
A2 PRESET OUT
A3 PRESET OUT
A4 PRESET OUT
CUE PRESET OUT
TC PRESET OUT
VIDEO PRESET OUT
CODING HOLE 1
CODING HOLE 2
CODING HOLE 3
CODING HOLE 4
USER HOLE 1
USER HOLE 2
USER HOLE 3
USER HOLE 4
PARALLEL I/O

IF-221 BOARD BLOCK DIAGRAM
BOARD NO. 1-627-695-11
DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

FUNCTION CONTROL PANEL

CP-106 BOARD	: Function Control Panel
DET-3 BOARD	: Search Dial Detector
PS-139 BOARD	: Power Supply Relaying
RE-44 BOARD	: Rotary Encoder Detector
SW-157 BOARD	: Switch
SW-158 BOARD	: Switch

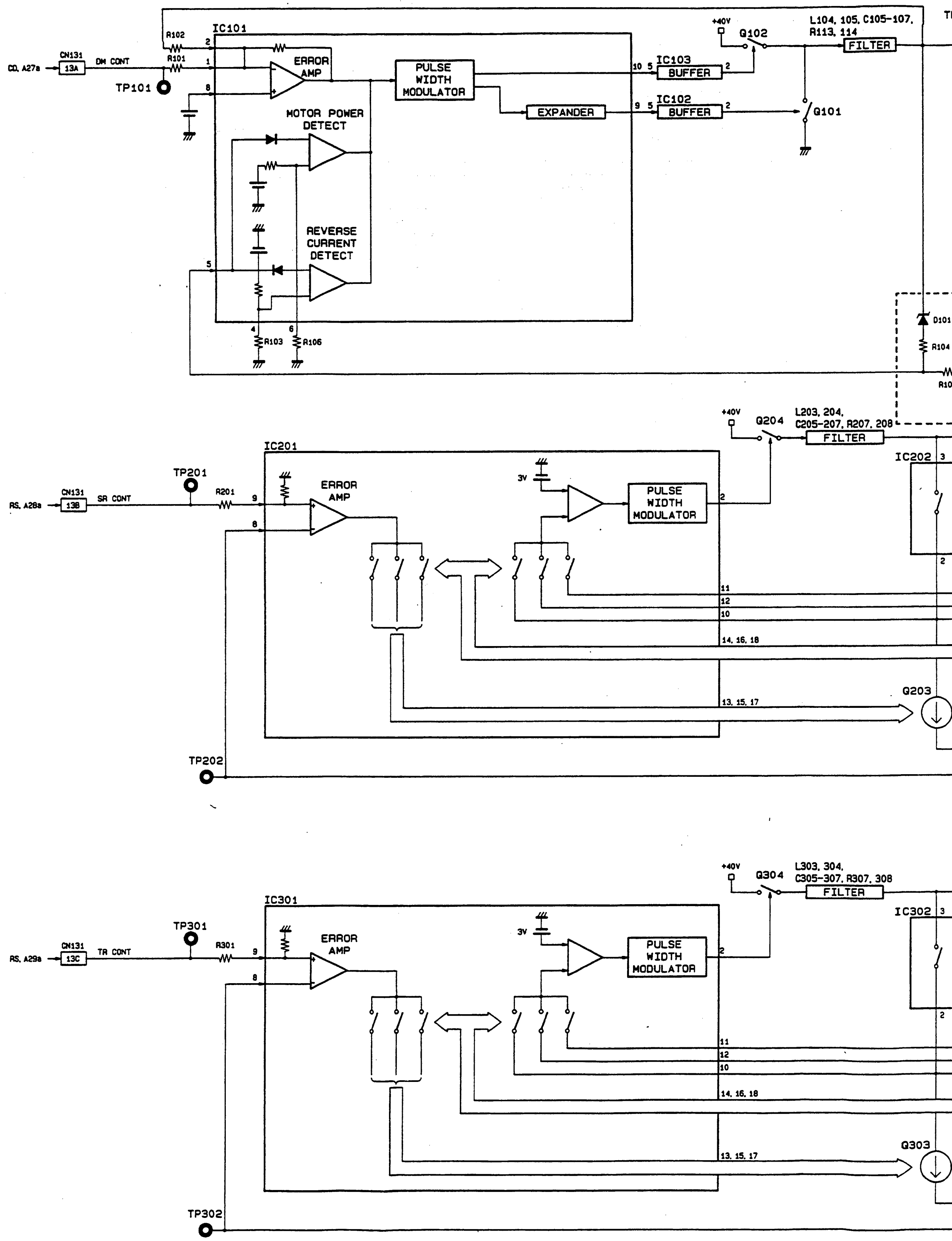

IC15
CPU
ADDRESS BUS
ADDRESS/DATA BUS
A0-A17
AD0-AD7
IC5
PERIPHERAL INTERFACE
IC17
ADDRESS BUFFER
IC16, 18
DATA BUS BUFFER
IC7
ROM
IC13
ROM
IC14
ROM
IC6
RAM
SW1
IC3
RESET PULSE GEN.
IC4
CLOCK GEN.
X1
CK GEN. 29.4912 MHz
IC12
BACK UP CONTROLLER
BATT.
IC17
BUFFER
IC9
EL PANEL CONTROLLER
IC10
MEMORY CONTROLLER
IC11, 19
RAM
EL DISPLAY
IC2
CTC
IC1
INTERRUPT CONTROLLER
IC8
SERIAL I/O
TP2
TP1
TP3
FRAME
VOLI
JOGI
INTAK
IC17
BUFFER
CN501
CN502
CN503
CN505
CN506
CN4
CN1
I/O SEL 2:L
I/O SEL 1:L
SPAR
J CLK
DATA
EL DATA
DOT CLK
VD
HD
RD:L
WR:L
+12V
CLUTCH
CH B
CH A
DME-1
MAGNETTO SENSING ELEMENT
IC1
AMP
RV2
DIAL PULSE AMP (CH-B)
RV1
DIAL PULSE AMP (CH-A)
SEARCH DIAL ELECTRO MAGNETIC CLUTCH
DET-3 BOARD
ADJUSTMENT CONTROL
ENCODER PULSE AMP (CH-A)
ENCODER PULSE AMP (CH-B)
RE-44 BOARD
TXD
RXD
DOT CLK
FRAME
VOL PLS
JOG PLS
PR CLK
RESET:L
CP-106 BOARD
BOARD NO.1-620-876-11, 12

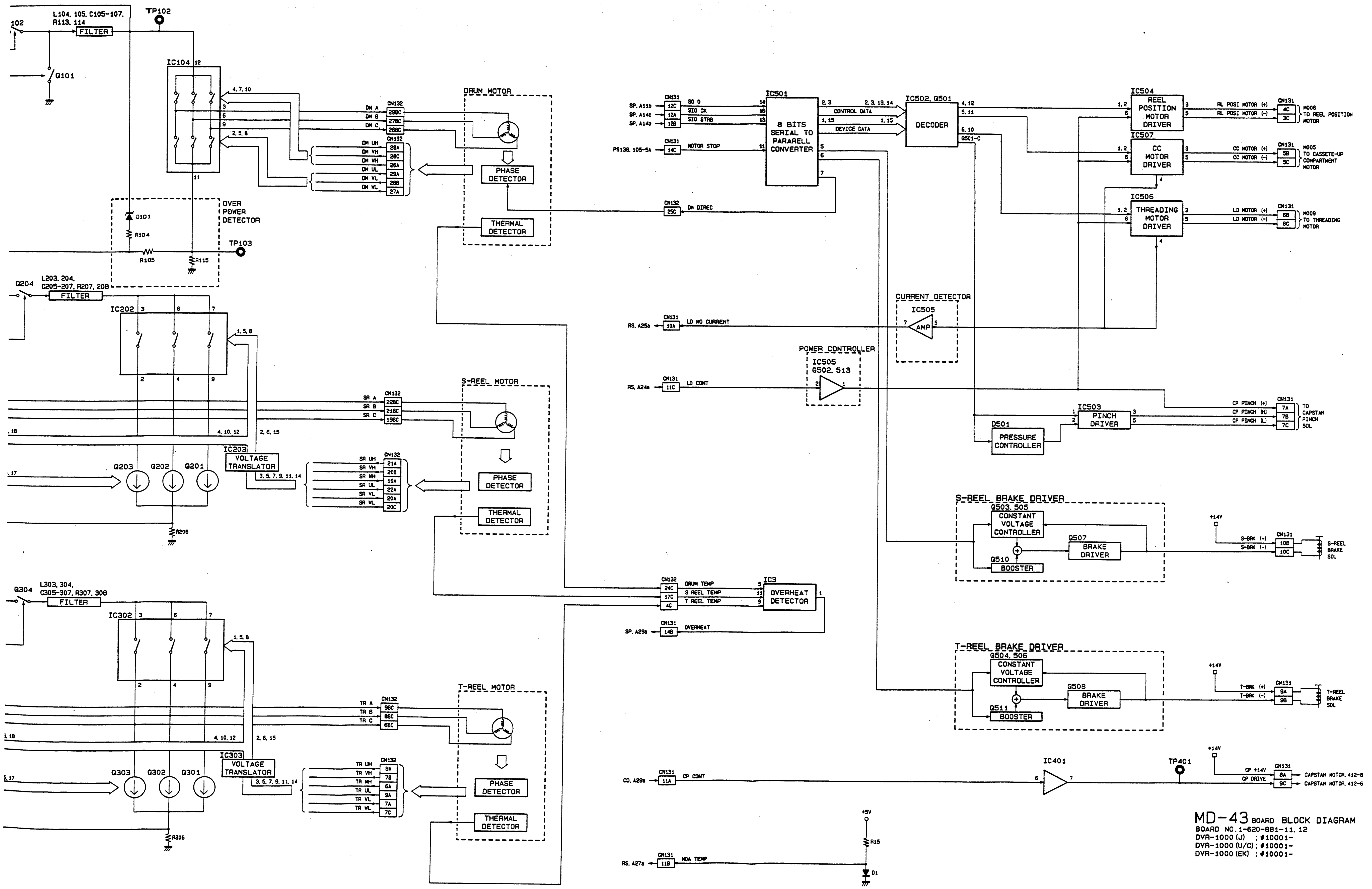

CN501
CN502
A2
A1
A0
D7
D6
D5
D4
D3
D2
D1
D0
ADDRESS BUS
DATA BUS
A0-A2
D0-D7
IC5
PARALLEL I/O
PA0-PA7
S1-S12
SWITCH MATRIX
PB0-PB3
PB0-PB7
PB1-PB7
S1-S9
LED
PC0-PC7, PD0-PD7
PX0-PX3
RD; L
WR; L
RD
WR
CS
RESET
I/O SEL 2: L
I/O SEL 1: L
SPAR
J CLK
DATA
IC8
IC9
RESET PULSE GEN.
IC3
S10-S12, D13-D16
PA0-PA7, PB0-PB7
PB6, PB7
CN4
CN503
EL DATA
DOT CLK
VD
HD
IC1
PROGRAM-MABLE SOUND GEN.
PC0-PC7
IC2
BUFFER
SP1
SPEAKER
CN1
CN506
+12V
CLUTCH
CH B
CH A
Q4
CN505
IC4
DIRECTION DETECTOR
IC7
RS-422 DRIVER/ RECEIVER
TXD
RXD
FRAME
VOL PLS
JOG PLS
PR CLK
RESET: L
CN504
CN508
SWKI 7
SWKI 6
SWKI 5
SWKI 4
SWKI 3
SWKI 2
SWKI 1
SWKI 0
SWKO 5
SWKO 4
SWKO 3
SWKO 2
SWKO 1
S1-S37
SW-158 BOARD
BOARD NO. 1-620-878-11, 12
CN507
CN509
PSKO 2
PSKO 1
PSKI 7
PSKI 6
PSKI 5
PSKI 4
PSKI 3
PSKI 2
PSKI 1
PSKI 0
S1-S15
LED 3
LED 2
LED 1
S5, S14, D20
+5V
+15V
+12V
TP1
TP2
TP3
TP4
IC3, 4
SW-REG
RV3 +5V OUTPUT VOLTAGE
RV4 +5V CURRENT LIMIT
IC1, 2
RV1 +15V OUTPUT VOLTAGE
RV2 +15V CURRENT LIMIT
R26
L4
CN510
+22V
TX+
TX-
RX+
RX-
FP, 207-1
PS138, 106-1B
MB133, 726-5
MB133, 726-4
MB133, 726-3
MB133, 726-2
SW-157 BOARD
BOARD NO. 1-620-877-11, 12
PS-139 BOARD
BOARD NO. 1-620-879-11, 12, 13

FUNCTION CONTROL PANEL BLOCK DIAGRAM
DVR-1000 (J) ; #10001-
DVR-1000 (U/C) ; #10001-
DVR-1000 (EK) ; #10001-

MD-43 BOARD

Motor Driver

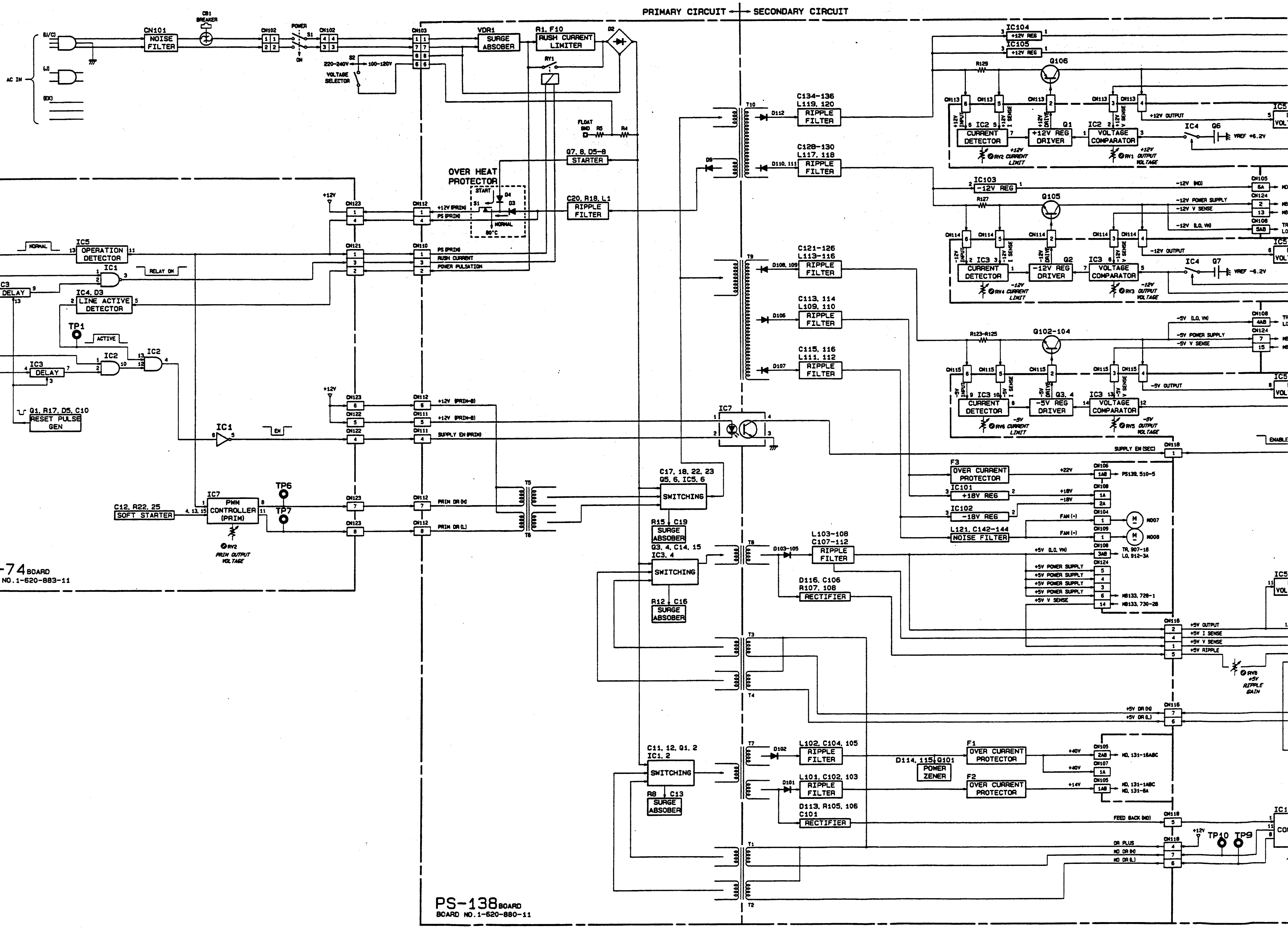

CD, A27a
CN131
13A
DM CONT
R102
R101
TP101
IC101
ERROR AMP
PULSE WIDTH MODULATOR
MOTOR POWER DETECT
REVERSE CURRENT DETECT
EXPANDER
R103
R106
IC103
BUFFER
IC102
BUFFER
+40V
Q102
Q101
L104, 105, C105-107, R113, 114
FILTER
D101
R104
RS, A28a
CN131
13B
SR CONT
TP201
R201
IC201
ERROR AMP
3V
PULSE WIDTH MODULATOR
+40V
Q204
L203, 204, C205-207, R207, 208
FILTER
IC202
11
12
10
14, 16, 18
13, 15, 17
Q203
TP202
RS, A29a
CN131
13C
TR CONT
TP301
R301
IC301
ERROR AMP
3V
PULSE WIDTH MODULATOR
+40V
Q304
L303, 304, C305-307, R307, 308
FILTER
IC302
11
12
10
14, 16, 18
13, 15, 17
Q303
TP302

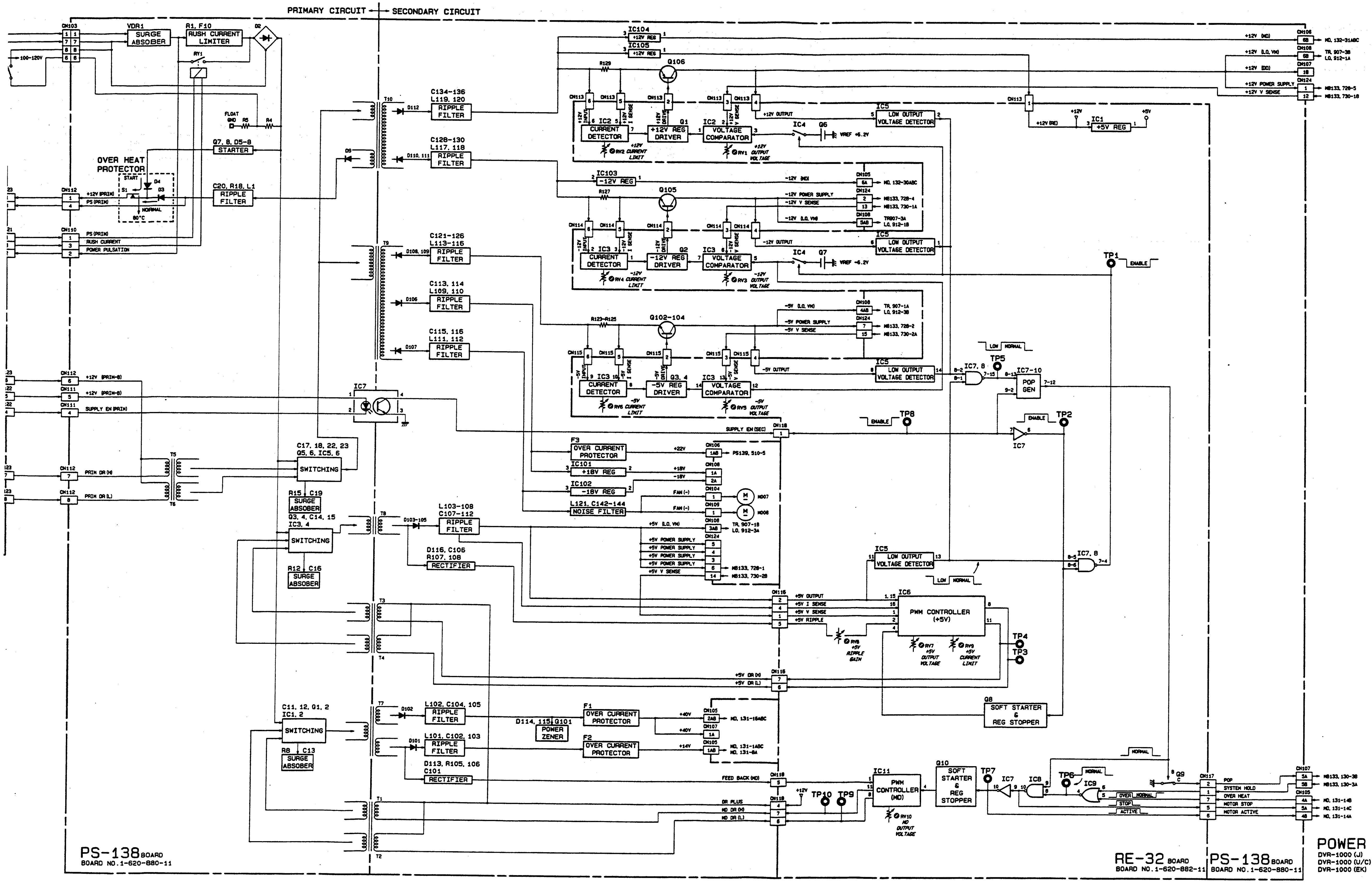

L104, 105, C105-107, R113, 114
FILTER
TP102
Q101
IC104
DH A
DH B
DH C
CN132
29BC
27BC
26BC
DH UH
DH VH
DH WH
DH UL
DH VL
DH WL
28A
28C
26A
29A
28B
27A
DRUM MOTOR
PHASE DETECTOR
THERMAL DETECTOR
OVER POWER DETECTOR
D101
R104
R105
R115
TP103
Q204
L203, 204, C205-207, R207, 208
FILTER
IC202
S-REEL MOTOR
SR A
SR B
SR C
22BC
21BC
19BC
IC203
VOLTAGE TRANSLATOR
Q203
Q202
Q201
R206
SR UH
SR VH
SR WH
SR UL
SR VL
SR WL
21A
20B
19A
22A
20A
20C
PHASE DETECTOR
THERMAL DETECTOR
Q304
L303, 304, C305-307, R307, 308
FILTER
IC302
T-REEL MOTOR
TR A
TR B
TR C
9BC
8BC
6BC
IC303
VOLTAGE TRANSLATOR
Q303
Q302
Q301
R306
TR UH
TR VH
TR WH
TR UL
TR VL
TR WL
8A
7B
6A
9A
7A
7C
PHASE DETECTOR
THERMAL DETECTOR
SP. A11b
SP. A14c
SP. A14b
CN131
12C
12A
12B
SO 0
SIO CK
SIO STRB
PS138, 105-5A
14C
MOTOR STOP
IC501
8 BITS SERIAL TO PARARELL CONVERTER
CONTROL DATA
DEVICE DATA
IC502, Q501
DECODER
Q501-C
CN132
25C
DM DIREC
IC504
REEL POSITION MOTOR DRIVER
RL POSI MOTOR (+)
RL POSI MOTOR (-)
4C
3C
M006 TO REEL POSITION MOTOR
IC507
CC MOTOR DRIVER
CC MOTOR (+)
CC MOTOR (-)
5B
5C
M005 TO CASSETE-UP COMPARTMENT MOTOR
IC506
THREADING MOTOR DRIVER
LD MOTOR (+)
LD MOTOR (-)
6B
6C
M009 TO THREADING MOTOR
CURRENT DETECTOR
IC505
AMP
RS. A25a
10A
LD NO CURRENT
POWER CONTROLLER
IC505 Q502, 513
RS. A24a
11C
LD CONT
IC503
PINCH DRIVER
D501
PRESSURE CONTROLLER
CP PINCH (+)
CP PINCH (H)
CP PINCH (L)
7A
7B
7C
TO CAPSTAN PINCH SOL
S-REEL BRAKE DRIVER
Q503, 505
CONSTANT VOLTAGE CONTROLLER
Q507
BRAKE DRIVER
Q510
BOOSTER
+14V
S-BRK (+)
S-BRK (-)
10B
10C
S-REEL BRAKE SOL
CN132
24C
17C
4C
DRUM TEMP
S REEL TEMP
T REEL TEMP
IC3
OVERHEAT DETECTOR
SP. A29a
14B
OVERHEAT
T-REEL BRAKE DRIVER
Q504, 506
CONSTANT VOLTAGE CONTROLLER
Q508
BRAKE DRIVER
Q511
BOOSTER
+14V
T-BRK (+)
T-BRK (-)
9A
9B
T-REEL BRAKE SOL
CD. A29a
11A
CP CONT
IC401
TP401
+14V
CP +14V
CP DRIVE
8A
9C
CAPSTAN MOTOR, 412-8
CAPSTAN MOTOR, 412-6
+5V
R15
D1
RS. A27a
11B
MDA TEMP

MD-43 BOARD BLOCK DIAGRAM
BOARD NO.1-620-881-11, 12
DVR-1000 (J) ; #10001-
DVR-1000 (U/C) ; #10001-
DVR-1000 (EK) ; #10001-

POWER SUPPLY

CT-74 BOARD ; Regulator Controller
PS-138 BOARD ; Power Supply
RE-32 BOARD ; Switching Regulator


PRIMARY CIRCUIT
SECONDARY CIRCUIT
AC IN
CN101
NOISE FILTER
CB1 BREAKER
CN102
POWER S1
ON
CN102
CN103
S2
220-240V
100-120V
VOLTAGE SELECTOR
VDR1
SURGE ABSOBER
R1, F10
RUSH CURRENT LIMITER
D2
RY1
FLOAT GND
R5
R4
Q7, 8, D5-8
STARTER
OVER HEAT PROTECTOR
START
NORMAL
80°C
C20, R18, L1
RIPPLE FILTER
IC5
OPERATION DETECTOR
NORMAL
IC1
RELAY ON
IC3
DELAY
IC4, D3
LINE ACTIVE DETECTOR
TP1
ACTIVE
IC2
IC3
DELAY
Q1, R17, D5, C10
RESET PULSE GEN
IC1
EN
+12V
CN123
CN121
CN122
CN112
CN110
CN111
+12V (PRIM)
PS (PRIM)
RUSH CURRENT
POWER PULSATION
+12V (PRIM-B)
SUPPLY EN (PRIM)
PRIM DR (H)
PRIM DR (L)
C12, R22, 25
SOFT STARTER
IC7
PWM CONTROLLER (PRIM)
RV2
PRIM OUTPUT VOLTAGE
TP6
TP7
CT-74 BOARD
BOARD NO.1-620-883-11
T5
T6
C17, 18, 22, 23
Q5, 6, IC5, 6
SWITCHING
R15 C19
SURGE ABSOBER
Q3, 4, C14, 15
IC3, 4
SWITCHING
R12 C16
SURGE ABSOBER
C11, 12, Q1, 2
IC1, 2
SWITCHING
R8 C13
SURGE ABSOBER
IC7
T10
T9
T8
T3
T4
T7
T1
T2
D9
D112
C134-136
L119, 120
RIPPLE FILTER
D110, 111
C128-130
L117, 118
RIPPLE FILTER
D108, 109
C121-126
L113-116
RIPPLE FILTER
D106
C113, 114
L109, 110
RIPPLE FILTER
D107
C115, 116
L111, 112
RIPPLE FILTER
D103-105
L103-108
C107-112
RIPPLE FILTER
D116, C106
R107, 108
RECTIFIER
D102
L102, C104, 105
RIPPLE FILTER
D101
L101, C102, 103
RIPPLE FILTER
D113, R105, 106
C101
RECTIFIER
D114, 115 Q101
POWER ZENER
F1
OVER CURRENT PROTECTOR
F2
OVER CURRENT PROTECTOR
F3
OVER CURRENT PROTECTOR
IC101
+18V REG
IC102
-18V REG
L121, C142-144
NOISE FILTER
IC104
+12V REG
IC105
+12V REG
R129
Q106
CN113
IC2
CURRENT DETECTOR
Q1
+12V REG DRIVER
IC2
VOLTAGE COMPARATOR
IC4
Q6
VREF +6.2V
RV2 +12V CURRENT LIMIT
RV1 +12V OUTPUT VOLTAGE
+12V OUTPUT
IC103
-12V REG
R127
Q105
CN114
IC3
CURRENT DETECTOR
Q2
-12V REG DRIVER
IC3
VOLTAGE COMPARATOR
IC4
Q7
VREF -6.2V
RV4 -12V CURRENT LIMIT
RV3 -12V OUTPUT VOLTAGE
-12V OUTPUT
-12V (HD)
-12V POWER SUPPLY
-12V V SENSE
-12V (LD, VH)
R123-R125
Q102-104
CN115
IC3
CURRENT DETECTOR
Q3, 4
-5V REG DRIVER
IC3
VOLTAGE COMPARATOR
RV6 -5V CURRENT LIMIT
RV5 -5V OUTPUT VOLTAGE
-5V OUTPUT
-5V (LD, VH)
-5V POWER SUPPLY
-5V V SENSE
CN105
CN124
CN106
CN108
SUPPLY EN (SEC)
CN118
ENABLE
+22V
PS139, 510-5
+18V
-18V
FAN (+)
FAN (-)
M007
M008
+5V (LD, VH)
TR, 907-18
LG, 912-3A
+5V POWER SUPPLY
+5V V SENSE
HB133, 729-1
HB133, 730-2B
CN116
+5V OUTPUT
+5V I SENSE
+5V V SENSE
+5V RIPPLE
RV8 +5V RIPPLE GAIN
+5V DR (H)
+5V DR (L)
+40V
+14V
HD, 131-16ABC
HD, 131-1ABC
HD, 131-8A
FEED BACK (HD)
DR PLUS
HD DR (H)
HD DR (L)
+12V
TP10
TP9
IC5
PS-138 BOARD
BOARD NO.1-620-880-11


PRIMARY CIRCUIT
SECONDARY CIRCUIT
CN103
VDR1 SURGE ABSOBER
R1, F10 RUSH CURRENT LIMITER
RY1
D2
100-120V
FLOAT GND
R5
R4
Q7, 8, D5-8 STARTER
OVER HEAT PROTECTOR
START
NORMAL
80°C
S1
D4
D3
C20, R18, L1 RIPPLE FILTER
CN112
+12V (PRIM)
PS (PRIM)
CN110
PS (PRIM)
RUSH CURRENT
POWER PULSATION
+12V (PRIM-B)
SUPPLY EN (PRIM)
PRIM DR (H)
PRIM DR (L)
T10
D112
C134-136 L119, 120 RIPPLE FILTER
D9
D110, 111
C128-130 L117, 118 RIPPLE FILTER
T9
D108, 109
C121-126 L113-115 RIPPLE FILTER
D106
C113, 114 L109, 110 RIPPLE FILTER
D107
C115, 116 L111, 112 RIPPLE FILTER
IC7
T5
T6
C17, 18, 22, 23 Q5, 6, IC5, 6 SWITCHING
R15 C19 SURGE ABSOBER
Q3, 4, C14, 15 IC3, 4 SWITCHING
R12 C16 SURGE ABSOBER
T8
D103-105
L103-108 C107-112 RIPPLE FILTER
D116, C106 R107, 108 RECTIFIER
T3
T4
C11, 12, Q1, 2 IC1, 2 SWITCHING
R8 C13 SURGE ABSOBER
T7
D102
L102, C104, 105 RIPPLE FILTER
D101
L101, C102, 103 RIPPLE FILTER
D113, R105, 106 C101 RECTIFIER
D114, 115 Q101 POWER ZENER
T1
T2
IC104 +12V REG
IC105 +12V REG
R129
Q106
CN113
+12V INPUT
+12V I SENSE
+12V DRIVE
+12V V SENSE
IC2 CURRENT DETECTOR
+12V REG DRIVER
Q1
IC2 VOLTAGE COMPARATOR
RV2 +12V CURRENT LIMIT
RV1 +12V OUTPUT VOLTAGE
+12V OUTPUT
IC5 LOW OUTPUT VOLTAGE DETECTOR
IC4
Q6
VREF +6.2V
IC103 -12V REG
R127
Q105
CN114
-12V INPUT
-12V I SENSE
-12V DRIVE
-12V V SENSE
IC3 CURRENT DETECTOR
-12V REG DRIVER
Q2
IC3 VOLTAGE COMPARATOR
RV4 -12V CURRENT LIMIT
RV3 -12V OUTPUT VOLTAGE
-12V OUTPUT
IC4
Q7
-12V (MD)
-12V POWER SUPPLY
-12V V SENSE
-12V (LO, VH)
R123-R125
Q102-104
CN115
-5V INPUT
-5V I SENSE
-5V DRIVE
-5V V SENSE
IC3 CURRENT DETECTOR
Q3, 4 -5V REG DRIVER
IC3 VOLTAGE COMPARATOR
RV6 -5V CURRENT LIMIT
RV5 -5V OUTPUT VOLTAGE
-5V OUTPUT
-5V (LO, VH)
-5V POWER SUPPLY
-5V V SENSE
SUPPLY EN (SEC)
CN118
F3 OVER CURRENT PROTECTOR
+22V
IC101 +18V REG
+18V
-18V
IC102 -18V REG
FAN (-)
L121, C142-144 NOISE FILTER
M008
M007
+5V (LO, VH)
+5V POWER SUPPLY
+5V V SENSE
CN116
+5V OUTPUT
+5V I SENSE
+5V V SENSE
+5V RIPPLE
IC6 PWM CONTROLLER (+5V)
RV8 +5V RIPPLE GAIN
RV7 +5V OUTPUT VOLTAGE
RV9 +5V CURRENT LIMIT
TP4
TP3
+5V DR (H)
+5V DR (L)
Q8 SOFT STARTER & REG STOPPER
F1 OVER CURRENT PROTECTOR
+40V
F2 OVER CURRENT PROTECTOR
+14V
FEED BACK (MD)
DR PLUS
MD DR (H)
MD DR (L)
TP10
TP9
IC11 PWM CONTROLLER (MD)
RV10 MD OUTPUT VOLTAGE
Q10 SOFT STARTER & REG STOPPER
TP7
IC7
IC8
TP6
IC9
Q9
NORMAL
OVER HEAT
STOP
ACTIVE
CN117
POP
SYSTEM HOLD
OVER HEAT
MOTOR STOP
MOTOR ACTIVE
TP1
ENABLE
LOW NORMAL
IC7, 8
TP5
IC7-10 POP GEN
TP8
TP2
IC1 +5V REG
+12V (RE)
+12V
+5V
+12V (MD)
+12V (LO, VH)
+12V (DD)
+12V POWER SUPPLY
+12V V SENSE
CN106
CN108
CN107
CN124
CN105
CN104
CN109
MD, 132-31ABC
TR, 907-3B
LO, 912-1A
MB133, 728-5
MB133, 730-1B
MD, 132-30ABC
MB133, 728-4
MB133, 730-1A
TR907-3A
LO, 912-1B
TR, 907-1A
LO, 912-3B
MB133, 728-2
MB133, 730-2A
PS139, 510-5
TR, 907-1B
LO, 912-3A
MB133, 728-1
MB133, 730-2B
MD, 131-18ABC
MD, 131-1ABC
MD, 131-8A
MB133, 130-3B
MB133, 130-3A
MD, 131-14B
MD, 131-14C
MD, 131-14A
PS-138 BOARD
BOARD NO. 1-620-880-11
RE-32 BOARD
BOARD NO. 1-620-882-11
PS-138 BOARD
BOARD NO. 1-620-880-11

POWER SUPPLY BLOCK DIAGRAM
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

SECTION B
SCHEMATIC DIAGRAMS & BOARD LAYOUTS

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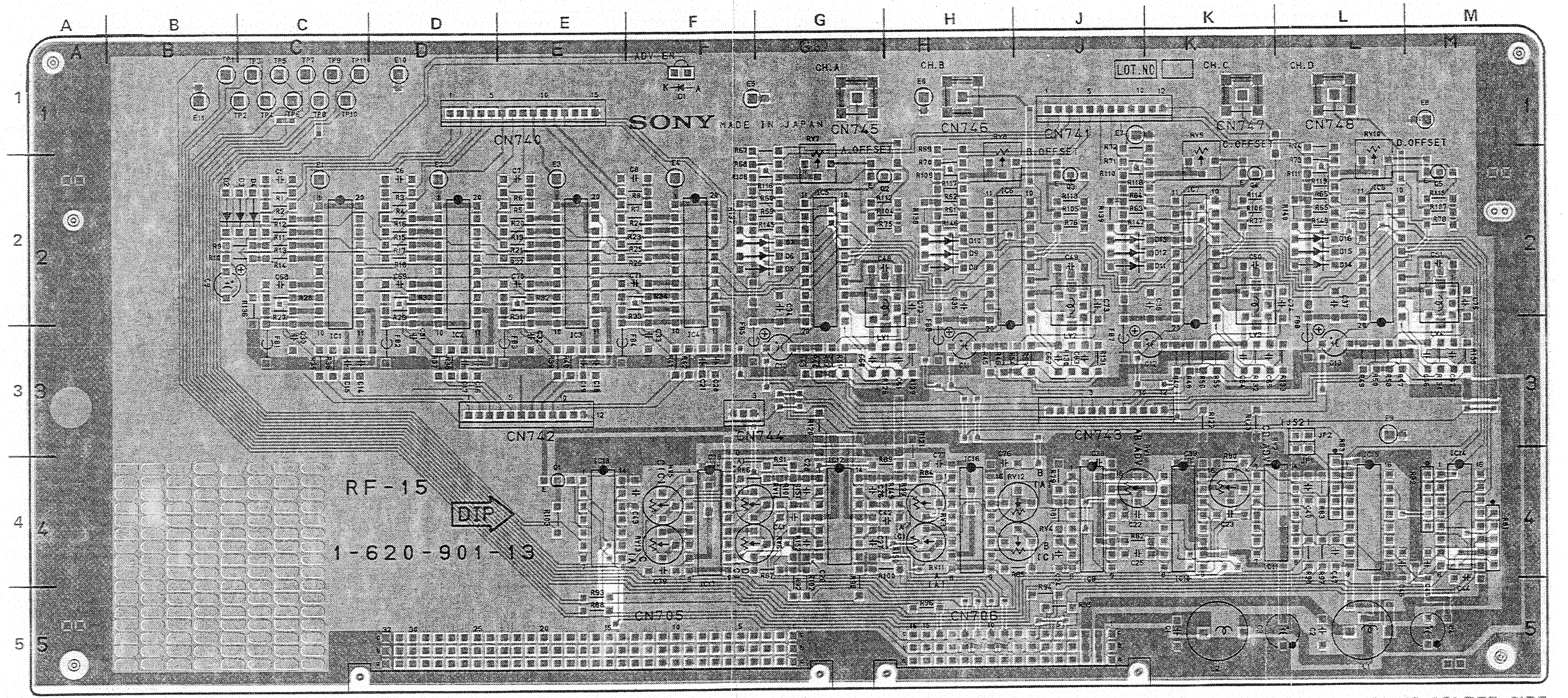
RF-15 BOARD (1-620-901-13)

Component Side


A
B
C
D
E
F
G
H
J
K
L
M
1
2
3
4
5
CN740
CN741
CN742
CN743
CN744
CN745
CN746
CN747
CN748
CN705
CN706
SONY
MADE IN JAPAN
CH.A
CH.B
CH.C
CH.D
LOT.NO
A.OFFSET
B.OFFSET
C.OFFSET
D.OFFSET
ADV.
RF-15
DIP
1-620-901-13

1-620-901-13 COMPONENT SIDE

1-620-901-13 SOLDER SIDE

RF-15 BOARD CARD RACK

RF-15 (1-620-901-13)

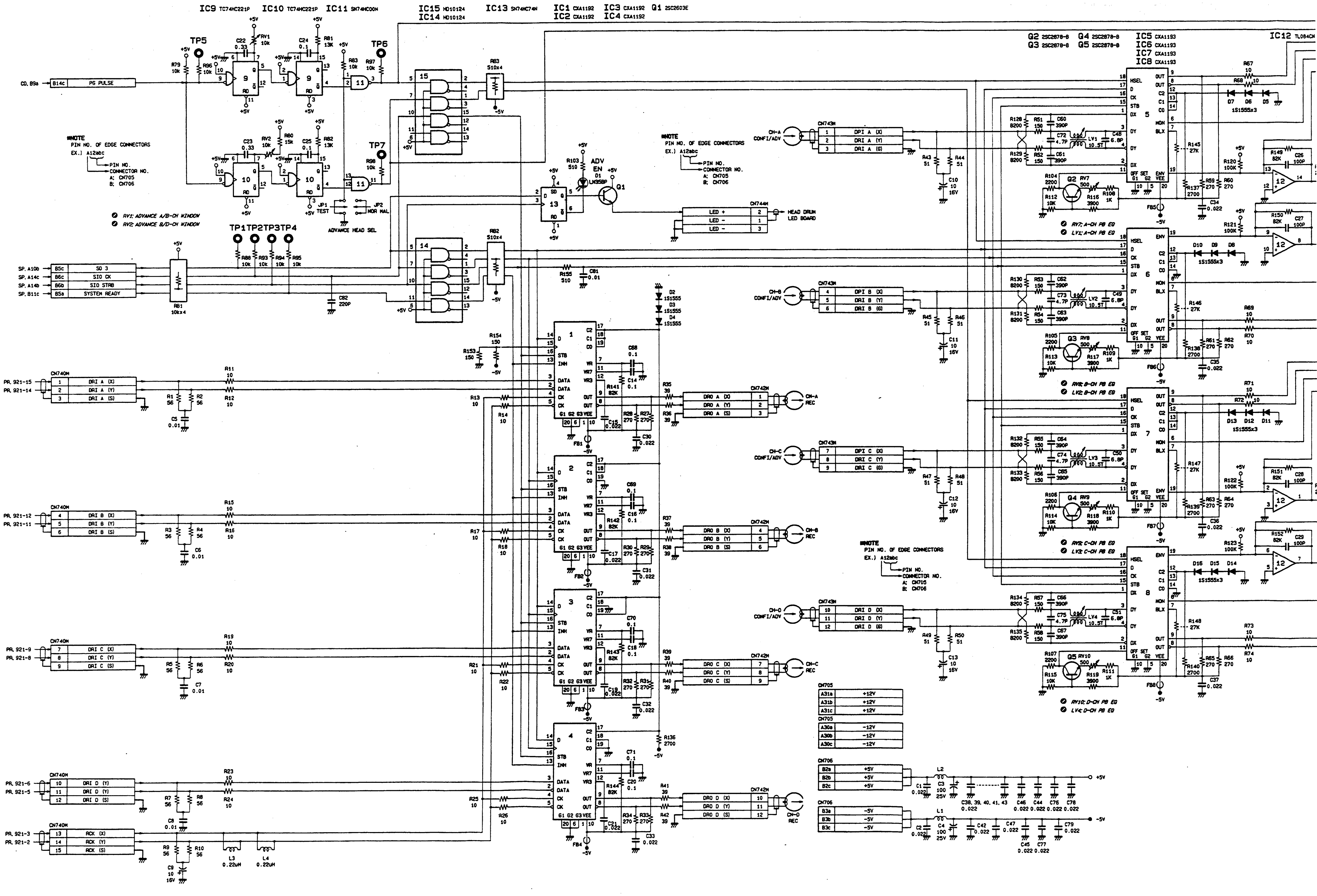
DVR-1000

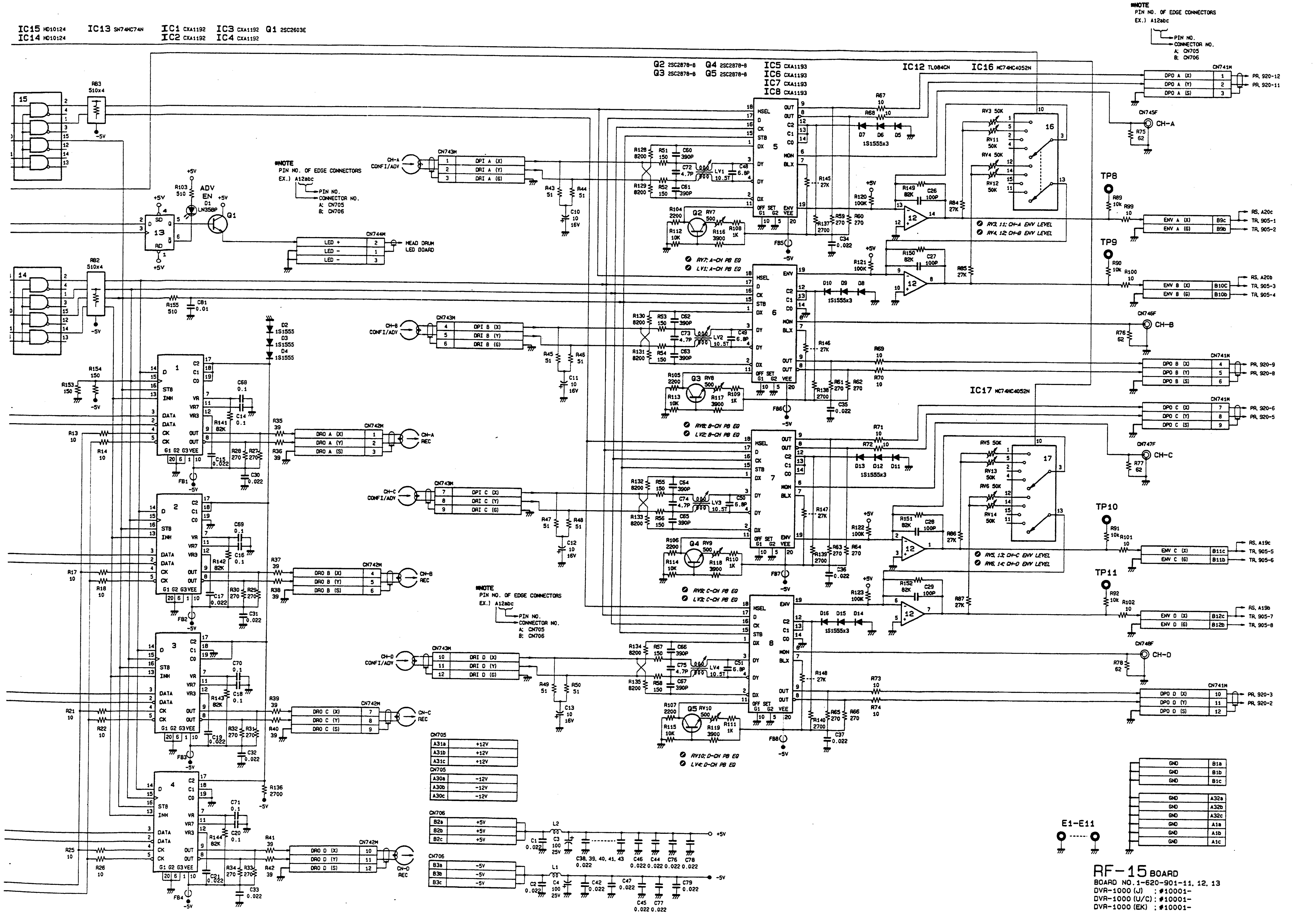
CN705M	F5
CN706M	H5
CN740M	E1
CN741M	J1
CN742M	E3
CN743M	J3
CN744M	F3
CN745M	G1
CN746M	H1
CN747M	K1
CN748M	L1
D1	F1
D2	B2
D3	C2
D4	C2
D5	G2
D6	G2
D7	G2
D8	H2
D9	H2
D10	H2
D11	J2
D12	J2
D13	J2
D14	L2
D15	L2
D16	L2
E1	C2
E2	D2
E3	E2
E4	F2
E5	F1
E6	H1
E7	J1
E8	M1
E9	L3
E10	D1
E11	B1
FB1	C3
FB2	D3
FB3	E3
FB4	E3
FB5	F3
FB6	H3
FB7	J3
FB8	L3
IC1	C2
IC2	D2
IC3	E2
IC4	F2
IC5	G2

IC6	C9
IC7	C11
IC8	C13
IC9	E10
IC10	E11
IC11	E12
IC12	E8
IC13	E6
IC14	E14
IC15	E13
IC16	H4
IC17	F4
JP1	E12
JP2	E12
Q1	E5
Q2	B8
Q3	B9
Q4	B11
Q5	B14
RB1	E14
RB2	E14
RB3	E12
RV1	E10
RV2	E11
RV3	E9
RV4	E9
RV5	E7
RV6	E7
RV7	B7
RV8	B9
RV9	B11
RV10	B13
RV11	H4
RV12	H4
RV13	F4
RV14	F4
TP1	A1
TP2	A1
TP3	A1
TP4	A2
TP5	A2
TP6	A2
TP7	A2
TP8	A2
TP9	A2
TP10	A2
TP11	A2

Ref. No.	Pin No.		
	+5V	GND	−5V
IC 1		1, 6, 20	10
IC 2		1, 6 20	10
IC 3		1, 6 20	10
IC 4		1, 6 20	10
IC 5		5, 10	20
IC 6		5, 10	20
IC 7		5, 10	20
IC 8		5, 10	20
IC 9	16	8	
IC 10	16	8	
IC 11	14	7	
IC 12	4		11
IC 13	14	7	
IC 14	9	16	8
IC 15	9	16	8
IC 16	16	8	7
IC 17	16	8	7

RF-15 BOARD
RF

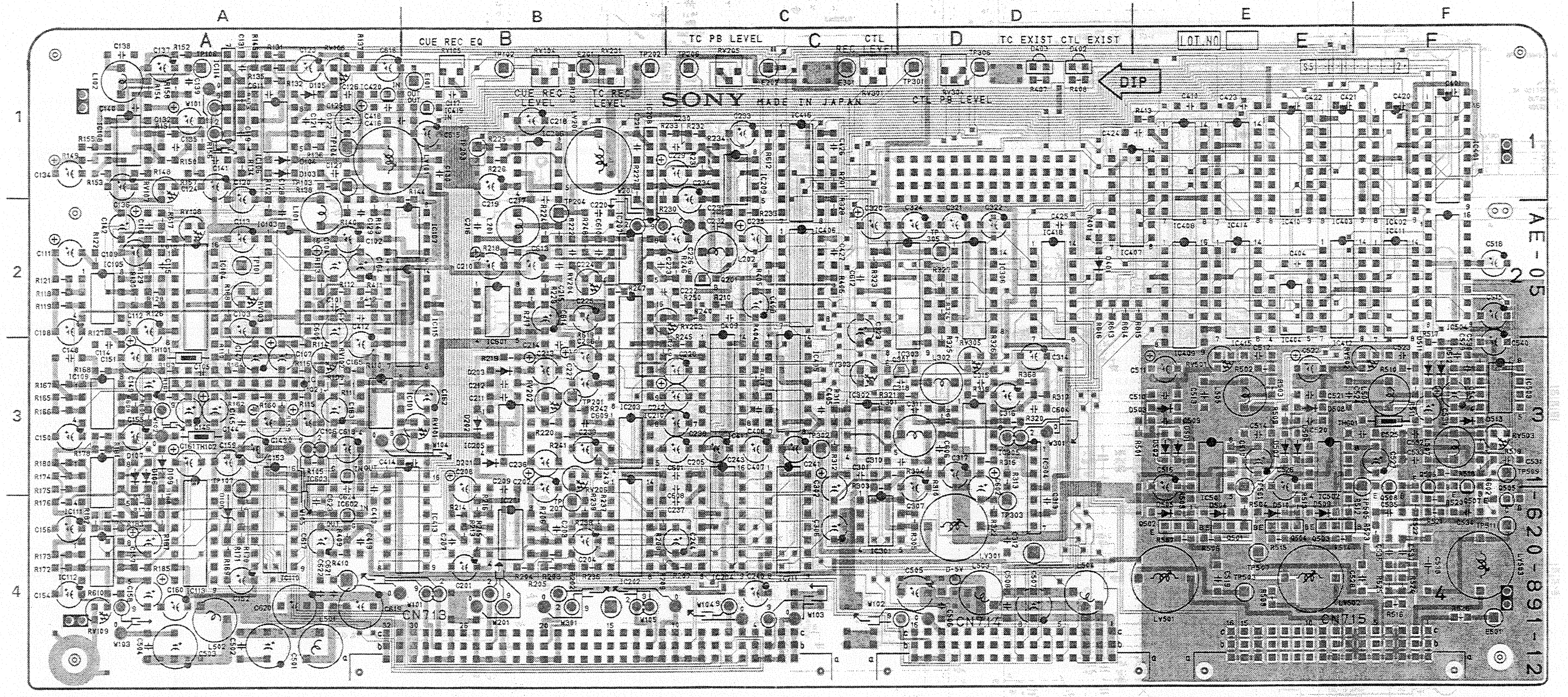

IC9 TC74HC221P IC10 TC74HC221P IC11 SN74HC00N
IC15 MD10124
IC14 MD10124
IC13 SN74HC74N
IC1 CXA1192 IC3 CXA1192 Q1 2SC2603E
IC2 CXA1192 IC4 CXA1192
Q2 2SC2878-B Q4 2SC2878-B
Q3 2SC2878-B Q5 2SC2878-B
IC5 CXA1193
IC6 CXA1193
IC7 CXA1193
IC8 CXA1193
IC12 TL084CN
TP5
TP6
TP7
TP1 TP2 TP3 TP4
PG PULSE
SD 3
SIO CK
SIO STRB
SYSTEM READY
#NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN705
B: CN706
RV1: ADVANCE A/B-CH WINDOW
RV2: ADVANCE B/D-CH WINDOW
ADVANCE HEAD SEL
TEST
NOR MAL
ADV EN
LN358P
HEAD DRUM LED BOARD
LED +
LED −
LED −
CH-A CONFI/ADV
CH-B CONFI/ADV
CH-C CONFI/ADV
CH-D CONFI/ADV
CH-A REC
CH-B REC
CH-C REC
CH-D REC
DRI A (X)
DRI A (Y)
DRI A (S)
DRI B (X)
DRI B (Y)
DRI B (S)
DRI C (X)
DRI C (Y)
DRI C (S)
DRI D (Y)
DRI D (Y)
DRI D (S)
RCK (X)
RCK (Y)
RCK (S)
DRO A (X)
DRO A (Y)
DRO A (S)
DRO B (X)
DRO B (Y)
DRO B (S)
DRO C (X)
DRO C (Y)
DRO C (S)
DRO D (X)
DRO D (Y)
DRO D (S)
DPI A (X)
DRI A (Y)
DRI A (S)
DPI B (X)
DRI B (Y)
DRI B (S)
DPI C (X)
DRI C (Y)
DRI C (S)
DRI D (X)
DRI D (Y)
DRI D (S)
RV7: A-CH PB EQ
LV1: A-CH PB EQ
RV8: B-CH PB EQ
LV2: B-CH PB EQ
RV9: C-CH PB EQ
LV3: C-CH PB EQ
RV10: D-CH PB EQ
LV4: D-CH PB EQ
1S1555x3
CN705
A31a +12V
A31b +12V
A31c +12V
A30a −12V
A30b −12V
A30c −12V
CN706
B2a +5V
B2b +5V
B2c +5V
B3a −5V
B3b −5V
B3c −5V
+5V
−5V
L3 0.22uH
L4 0.22uH
PR. 921-15
PR. 921-14
PR. 921-12
PR. 921-11
PR. 921-9
PR. 921-8
PR. 921-6
PR. 921-5
PR. 921-3
PR. 921-2
CN740M
CN742M
CN743M
CN744M


IC15 MD10124
IC14 MD10124
IC13 SN74HC74N
IC1 CXA1192 IC3 CXA1192 Q1 2SC2603E
IC2 CXA1192 IC4 CXA1192
Q2 2SC2878-8 Q4 2SC2878-8
Q3 2SC2878-8 Q5 2SC2878-8
IC5 CXA1193
IC6 CXA1193
IC7 CXA1193
IC8 CXA1193
IC12 TL084CN
IC16 MC74HC4052N
IC17 MC74HC4052N
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN705
B: CN706
ADV EN
LED +
LED -
LED -
HEAD DRUM LED BOARD
CH-A CONFI/ADV
CH-B CONFI/ADV
CH-C CONFI/ADV
CH-D CONFI/ADV
DPI A (X)
DRI A (Y)
DRI A (G)
DRO A (X)
DRO A (Y)
DRO A (G)
CH-A REC
CH-B REC
CH-C REC
CH-D REC
RV7: A-CH PB EQ
LV1: A-CH PB EQ
RV8: B-CH PB EQ
LV2: B-CH PB EQ
RV9: C-CH PB EQ
LV3: C-CH PB EQ
RV10: D-CH PB EQ
LV4: D-CH PB EQ
RV3, 11: CH-A ENV LEVEL
RV4, 12: CH-B ENV LEVEL
RV5, 13: CH-C ENV LEVEL
RV6, 14: CH-D ENV LEVEL
TP8
TP9
TP10
TP11
ENV A (X)
ENV A (G)
ENV B (X)
ENV B (G)
ENV C (X)
ENV C (G)
ENV D (X)
ENV D (G)
DPO A (X)
DPO A (Y)
DPO A (G)
CH-A
CH-B
CH-C
CH-D
PR. 920-12
PR. 920-11
PR. 920-9
PR. 920-8
PR. 920-6
PR. 920-5
PR. 920-3
PR. 920-2
RS. A20c
TR. 905-1
TR. 905-2
RS. A20b
TR. 905-3
TR. 905-4
RS. A19c
TR. 905-5
TR. 905-6
RS. A19b
TR. 905-7
TR. 905-8
CN705
A31a +12V
A31b +12V
A31c +12V
A30a -12V
A30b -12V
A30c -12V
CN706
B2a +5V
B2b +5V
B2c +5V
B3a -5V
B3b -5V
B3c -5V
GND B1a
GND B1b
GND B1c
GND A32a
GND A32b
GND A32c
GND A1a
GND A1b
GND A1c
E1-E11

RF-15 BOARD
BOARD NO.1-620-901-11, 12, 13
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

AE-05 BOARD (1-620-891-12)

Component Side


A
B
C
D
E
F
1
2
3
4
CUE REC EQ
TC PB LEVEL
CTL REC LEVEL
TC EXIST
CTL EXIST
LOT NO
DIP
SONY
MADE IN JAPAN
CUE REC LEVEL
TC REC LEVEL
CTL PB LEVEL
CN713
CN714
CN715
AE-05
1-620-891-12

1-620-891-12 COMPONENT SIDE

1-620-891-12 SOLDER SIDE

AE-05 BOARD CARD RACK

AE-05 (1-620-891-12)

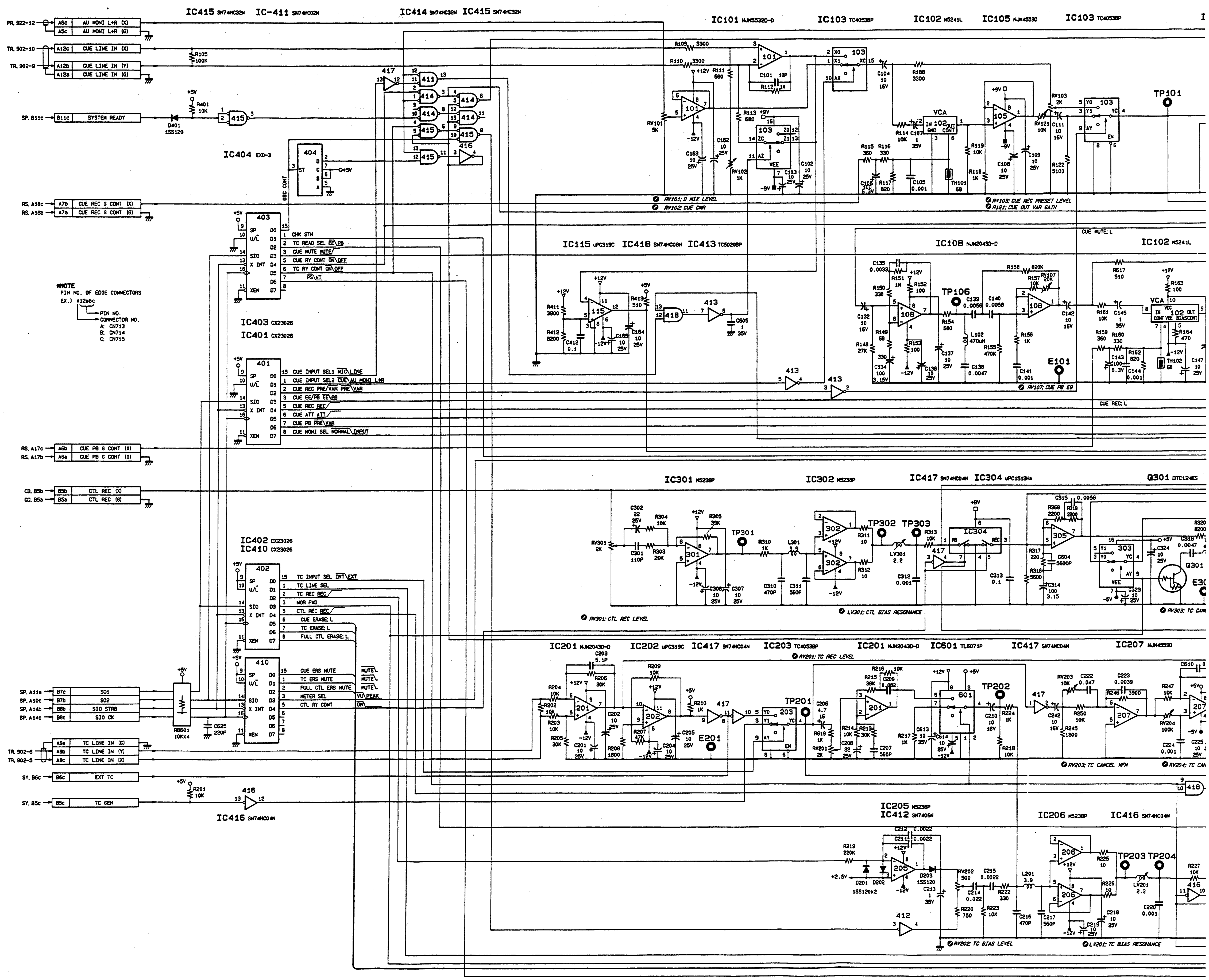
DVR-1000

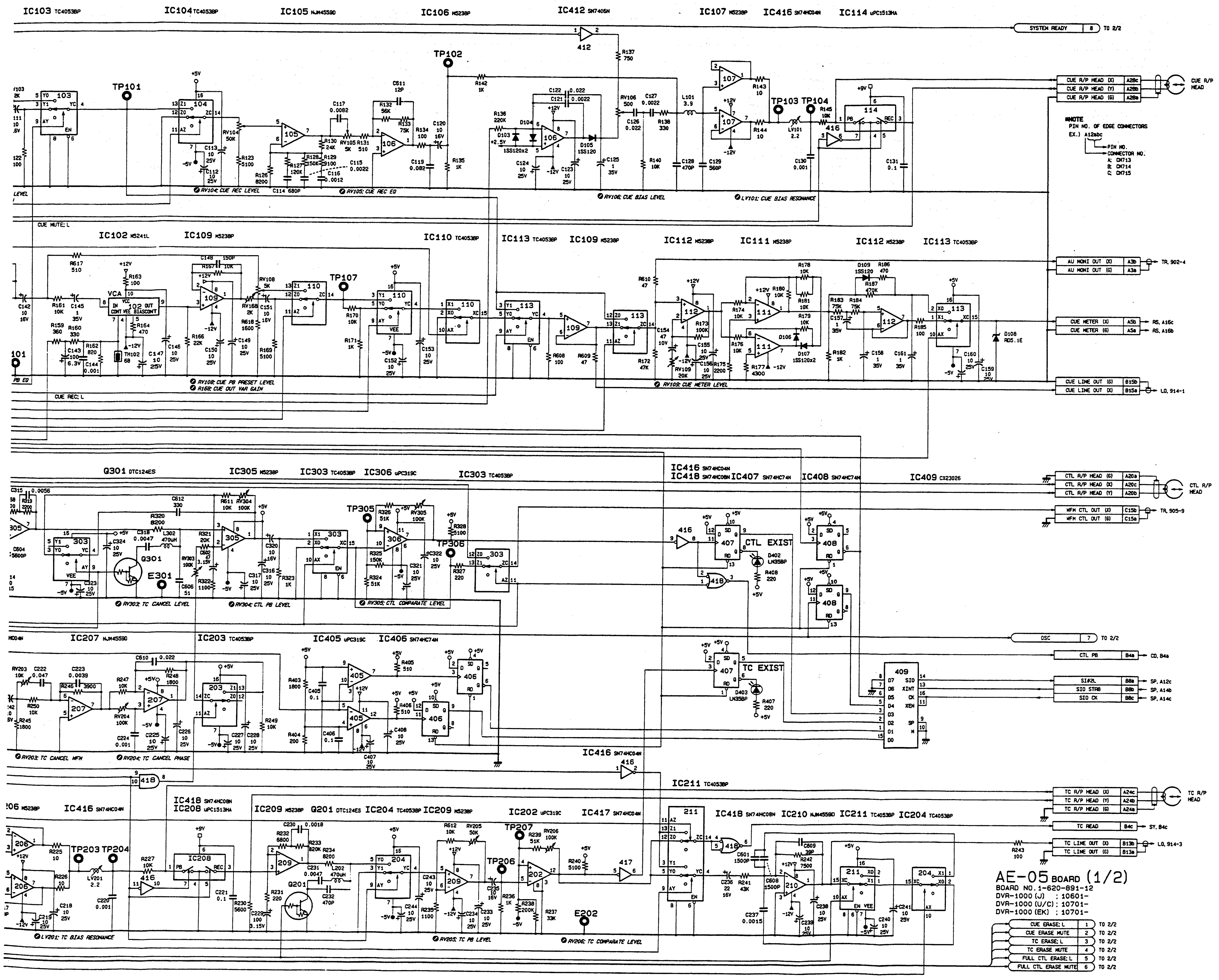
CN713M	B4
CN714M	D4
CN715M	E4
D103	A1
D104	A1
D105	A1
D106	A3
D107	A3
D108	A4
D109	A3
D201	B3
D202	B3
D203	B3
D401	D2
D402	D1
D403	D1
D501	E3
D502	E3
D503	E3
D504	E4
D505	E4
D506	E3
D507	E3
D508	E3
D509	E4
D510	E4
D511	F3
D512	F3
D513	F3
E101	B1
E201	B1
E202	C1
E301	C1
E501	F4
IC101	A3
IC102	A3
IC103	A2
IC104	A2
IC105	A2
IC106	A1
IC107	B2
IC108	A1
IC109	A3
IC110	A4
IC111	A3
IC112	A4
IC113	A4
IC114	A1
IC115	B2
IC201	B4
IC202	B4
IC203	B3
IC204	C4
IC205	B3
IC206	B1
IC207	B2
IC208	B1
IC209	C1
IC210	B3
IC211	C4
IC301	C4
IC302	C3
IC303	D2
IC304	D3
IC305	D3
IC306	D2
IC401	F1
IC402	F1
IC403	E1
IC404	E2
IC405	C3
IC406	C2
IC407	D2
IC408	E1
IC409	E2
IC410	E1
IC411	F2
IC412	E2
IC413	B4
IC414	E1
IC415	E2
IC416	C1
IC417	C3
IC418	D2
IC419	B1
IC420	A1
IC501	E3
IC502	E3
IC503	F3
IC504	F2
IC601	B2
IC602	A4
IC603	A3
LV101	A1
LV201	B1
LV301	D4
LV501	E4
LV502	E4
LV503	F4
Q201	C2
Q301	D3
Q501	E4
Q502	E4
Q503	E4
Q504	E4
Q505	F4
Q506	F4
Q507	F4
Q508	F4
RV101	B3
RV102	A3
RV103	A2
RV104	B1
RV105	B1
RV106	A1
RV107	A1
RV108	A2
RV109	A4
RV201	B1
RV202	B3
RV203	C2
RV204	B2
RV205	C1
RV206	B3
RV301	C1
RV303	C3
RV304	D1
RV305	D3
RV501	E3
RV502	F3
RV503	F3
TH101	A3
TH102	A3
TH601	F3
TP101	A2
TP102	B1
TP104	A1
TP106	A1
TP107	A3
TP201	B3
TP202	B1
TP203	B1
TP204	B2
TP206	C1
TP207	B4
TP301	D1
TP302	C3
TP303	D4
TP305	D2
TP306	D1
TP501	E3
TP503	E4
TP505	F4
TP507	E4
TP509	F3
TP511	F4

AE-05 BOARD (1/2)

Audio (CUE/CTL) & Erase

CARD RACK **AE-05 (1/2) BOARD** ▤ **AE-05 (1/2) BOARD** CARD RACK


IC415 SN74HC32N
IC-411 SN74HC02N
IC414 SN74HC32N
IC415 SN74HC32N
IC101 NJM5532D-D
IC103 TC4053BP
IC102 M5241L
IC105 NJM4559D
IC103 TC4053BP
PR. 922-12
A5c AU MONI L+R (X)
A5c AU MONI L+R (G)
TR. 902-10
A12c CUE LINE IN (X)
TR. 902-9
A12b CUE LINE IN (Y)
A12a CUE LINE IN (G)
SP. B11c
B11c SYSTEM READY
D401 1SS120
R401 10K
R105 100K
IC404 EXO-3
OSC CONT
RS. A18c
RS. A18b
A7b CUE REC G CONT (X)
A7a CUE REC G CONT (G)
403
CHK STN
TC READ SEL EE\PB
CUE MUTE MUTE/
CUE RY CONT ON\OFF
TC RY CONT ON\OFF
PS\NT
※NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN713
B: CN714
C: CN715
IC403 CX23026
IC401 CX23026
401
CUE INPUT SEL1 MIC\LINE
CUE INPUT SEL2 CUE\AU MONI L+R
CUE REC PRE/VAR PRE\VAR
CUE EE/PB EE\PB
CUE REC REC/
CUE ATT ATT/
CUE PB PRE\VAR
CUE MONI SEL NORMAL\INPUT
RS. A17c
RS. A17b
A6b CUE PB G CONT (X)
A6a CUE PB G CONT (G)
CD. B5b
CD. B5a
B5b CTL REC (X)
B5a CTL REC (G)
IC402 CX23026
IC410 CX23026
402
TC INPUT SEL INT\EXT
TC LINE SEL
TC REC REC/
NOR FWD
CTL REC REC/
CUE ERASE: L
TC ERASE: L
FULL CTL ERASE: L
410
CUE ERS MUTE
TC ERS MUTE
FULL CTL ERS MUTE
METER SEL
CTL RY CONT
MUTE\
VU\PEAK
ON\
SP. A11a
SP. A10c
SP. A14b
SP. A14c
B7c SO1
B7b SO2
B8b SIO STRB
B8c SIO CK
RB601 10Kx4
C625 220P
TR. 902-6
TR. 902-5
A9a TC LINE IN (G)
A9b TC LINE IN (Y)
A9c TC LINE IN (X)
SY. B6c
B6c EXT TC
SY. B5c
B5c TC GEN
R201 10K
IC416 SN74HC04N
RV101 5K
VCA
TP101
RV101: D MIX LEVEL
RV102: CUE CMR
RV103: CUE REC PRESET LEVEL
R121: CUE OUT VAR GAIN
IC115 uPC319C
IC418 SN74HC08N
IC413 TC5020BP
IC108 NJM2043D-D
IC102 M5241L
CUE MUTE: L
TP106
E101
RV107: CUE PB EQ
CUE REC: L
IC301 M5238P
IC302 M5238P
IC417 SN74HC04N
IC304 uPC1513HA
Q301 DTC124ES
TP301
TP302
TP303
RV301: CTL REC LEVEL
LV301: CTL BIAS RESONANCE
RV303: TC CANC
IC201 NJM2043D-D
IC202 uPC319C
IC417 SN74HC04N
IC203 TC4053BP
IC201 NJM2043D-D
IC601 TL6071P
IC417 SN74HC04N
IC207 NJM4559D
RV201: TC REC LEVEL
TP201
TP202
E201
RV203: TC CANCEL MFM
RV204: TC CAN
IC205 M5238P
IC412 SN74O6N
IC206 M5238P
IC416 SN74HC04N
TP203
TP204
D201 D202 1SS120x2
D203 1SS120
RV202: TC BIAS LEVEL
LV201: TC BIAS RESONANCE


IC103 TC4053BP
IC104 TC4053BP
IC105 NJM4559D
IC106 M5238P
IC412 SN7406N
IC107 M5238P
IC416 SN74HC04N
IC114 uPC1513HA
SYSTEM READY 8 TO 2/2
TP101
TP102
TP103
TP104
CUE R/P HEAD (X) A28c
CUE R/P HEAD (Y) A28b
CUE R/P HEAD (G) A28a
CUE R/P HEAD
RV104: CUE REC LEVEL
RV105: CUE REC EQ
RV106: CUE BIAS LEVEL
LV101: CUE BIAS RESONANCE
CUE MUTE: L
IC102 M5241L
IC109 M5238P
IC110 TC4053BP
IC113 TC4053BP
IC112 M5238P
IC111 M5238P
TP107
VCA
AU MONI OUT (X) A3b
AU MONI OUT (G) A3a
TR. 902-4
CUE METER (X) A5b
CUE METER (G) A5a
RS. A16c
RS. A16b
CUE LINE OUT (G) B15b
CUE LINE OUT (X) B15a
LO. 914-1
RV108: CUE PB PRESET LEVEL
R168: CUE OUT VAR GAIN
RV109: CUE METER LEVEL
CUE REC: L
Q301 DTC124ES
IC305 M5238P
IC303 TC4053BP
IC306 uPC319C
IC416 SN74HC04N
IC418 SN74HC08N
IC407 SN74HC74N
IC408 SN74HC74N
IC409 CX23026
TP305
TP306
E301
CTL EXIST
TC EXIST
CTL R/P HEAD (G) A20a
CTL R/P HEAD (X) A20c
CTL R/P HEAD (X) A20b
CTL R/P HEAD
WFM CTL OUT (X) C15b
WFM CTL OUT (G) C15a
TR. 905-9
RV303: TC CANCEL LEVEL
RV304: CTL PB LEVEL
RV305: CTL COMPARATE LEVEL
IC207 NJM4559D
IC203 TC4053BP
IC405 uPC319C
IC406 SN74HC74N
OSC 7 TO 2/2
CTL PB B4a
CD. B4a
SI#2L B8a
SIO STRB B8b
SIO CK B8c
SP. A12c
SP. A14b
SP. A14c
RV203: TC CANCEL WFM
RV204: TC CANCEL PHASE
IC416 SN74HC04N
IC211 TC4053BP
IC206 M5238P
IC416 SN74HC04N
IC418 SN74HC08N
IC208 uPC1513HA
IC209 M5238P
Q201 DTC124ES
IC204 TC4053BP
IC209 M5238P
IC202 uPC319C
IC417 SN74HC04N
IC418 SN74HC08N
IC210 NJM4559D
IC211 TC4053BP
IC204 TC4053BP
TP203
TP204
TP206
TP207
E202
TC R/P HEAD (X) A24c
TC R/P HEAD (Y) A24b
TC R/P HEAD (G) A24a
TC R/P HEAD
TC READ B4c
SY. B4c
TC LINE OUT (X) B13b
TC LINE OUT (G) B13a
LO. 914-3
LV201: TC BIAS RESONANCE
RV205: TC PB LEVEL
RV206: TC COMPARATE LEVEL

NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN713
B: CN714
C: CN715

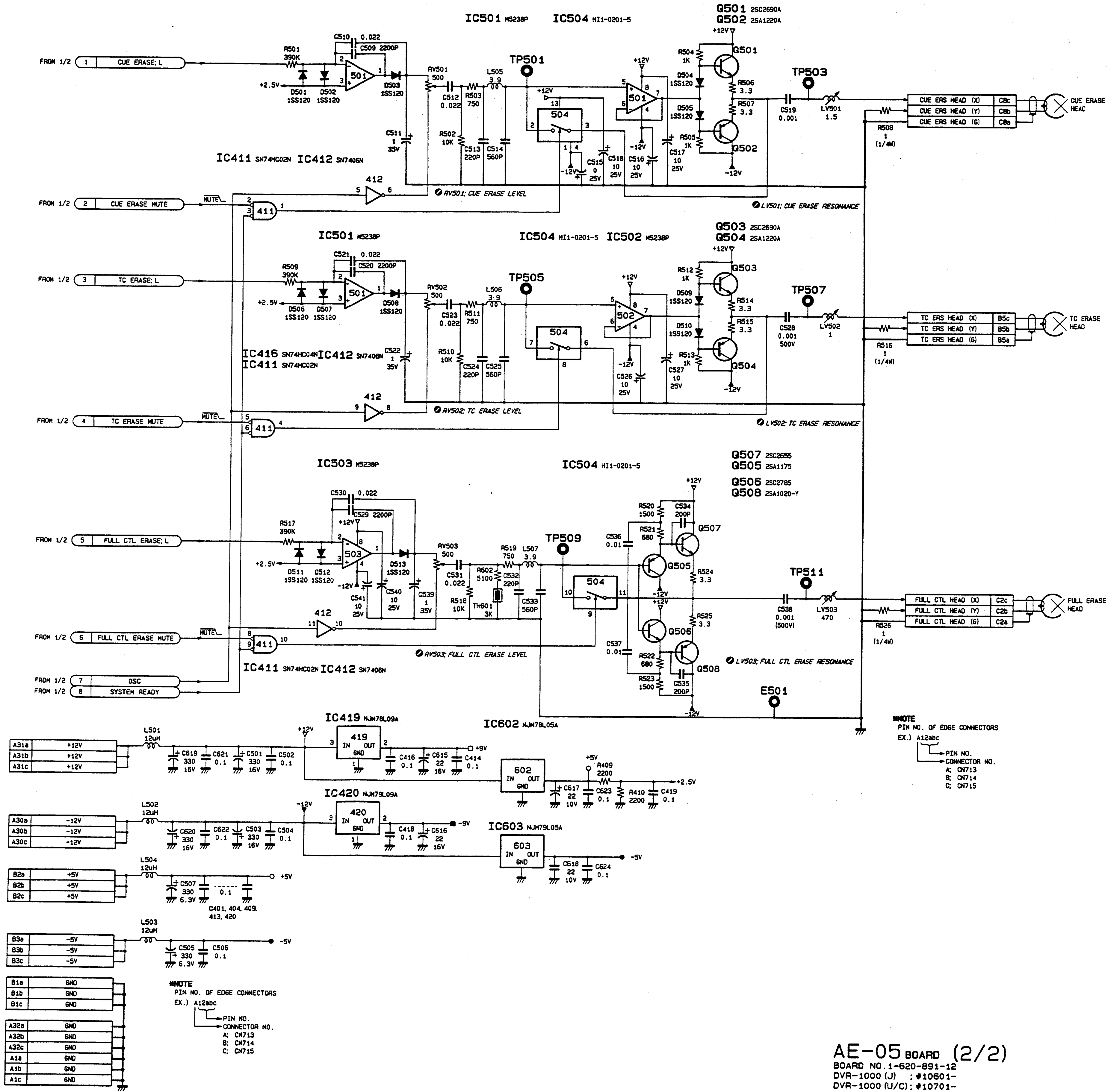
AE-05 BOARD (1/2)

BOARD NO. 1-620-891-12
DVR-1000 (J) : 10601-
DVR-1000 (U/C) : 10701-
DVR-1000 (EK) : 10701-

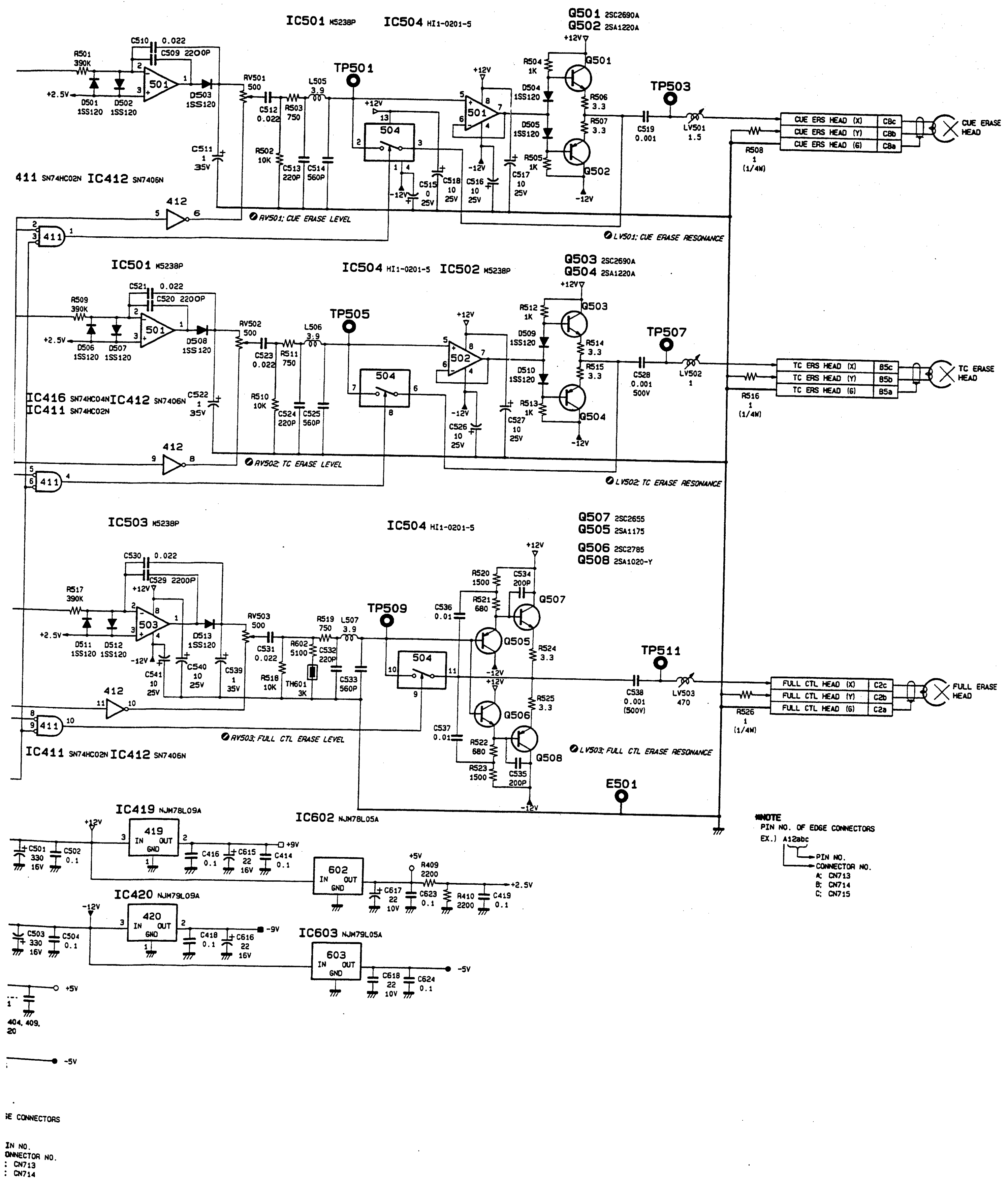
CUE ERASE: L	1	TO 2/2
CUE ERASE MUTE	2	TO 2/2
TC ERASE: L	3	TO 2/2
TC ERASE MUTE	4	TO 2/2
FULL CTL ERASE: L	5	TO 2/2
FULL CTL ERASE MUTE	6	TO 2/2

AE-05 BOARD (2/2)

Audio (CUE/CTL) & Erase


FROM 1/2 1 CUE ERASE; L
FROM 1/2 2 CUE ERASE MUTE
FROM 1/2 3 TC ERASE; L
FROM 1/2 4 TC ERASE MUTE
FROM 1/2 5 FULL CTL ERASE; L
FROM 1/2 6 FULL CTL ERASE MUTE
FROM 1/2 7 OSC
FROM 1/2 8 SYSTEM READY
IC501 M5238P
IC504 HI1-0201-5
IC502 M5238P
IC503 M5238P
IC411 SN74HC02N
IC412 SN7406N
IC416 SN74HC04N
Q501 2SC2690A
Q502 2SA1220A
Q503 2SC2690A
Q504 2SA1220A
Q507 2SC2655
Q505 2SA1175
Q506 2SC2785
Q508 2SA1020-Y
TP501
TP503
TP505
TP507
TP509
TP511
E501
RV501; CUE ERASE LEVEL
LV501; CUE ERASE RESONANCE
RV502; TC ERASE LEVEL
LV502; TC ERASE RESONANCE
RV503; FULL CTL ERASE LEVEL
LV503; FULL CTL ERASE RESONANCE
CUE ERS HEAD (X) C8c
CUE ERS HEAD (Y) C8b
CUE ERS HEAD (G) C8a
CUE ERASE HEAD
TC ERS HEAD (X) B5c
TC ERS HEAD (Y) B5b
TC ERS HEAD (G) B5a
TC ERASE HEAD
FULL CTL HEAD (X) C2c
FULL CTL HEAD (Y) C2b
FULL CTL HEAD (G) C2a
FULL ERASE HEAD
IC419 NJM78L09A
IC420 NJM79L09A
IC602 NJM78L05A
IC603 NJM79L05A
A31a +12V
A31b +12V
A31c +12V
A30a -12V
A30b -12V
A30c -12V
B2a +5V
B2b +5V
B2c +5V
B3a -5V
B3b -5V
B3c -5V
B1a GND
B1b GND
B1c GND
A32a GND
A32b GND
A32c GND
A1a GND
A1b GND
A1c GND
C401, 404, 409, 413, 420
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN713
B: CN714
C: CN715

AE-05 BOARD (2/2)
BOARD NO.1-620-891-12
DVR-1000 (J) ; #10601-
DVR-1000 (U/C) ; #10701-
DVR-1000 (EK) ; #10701-

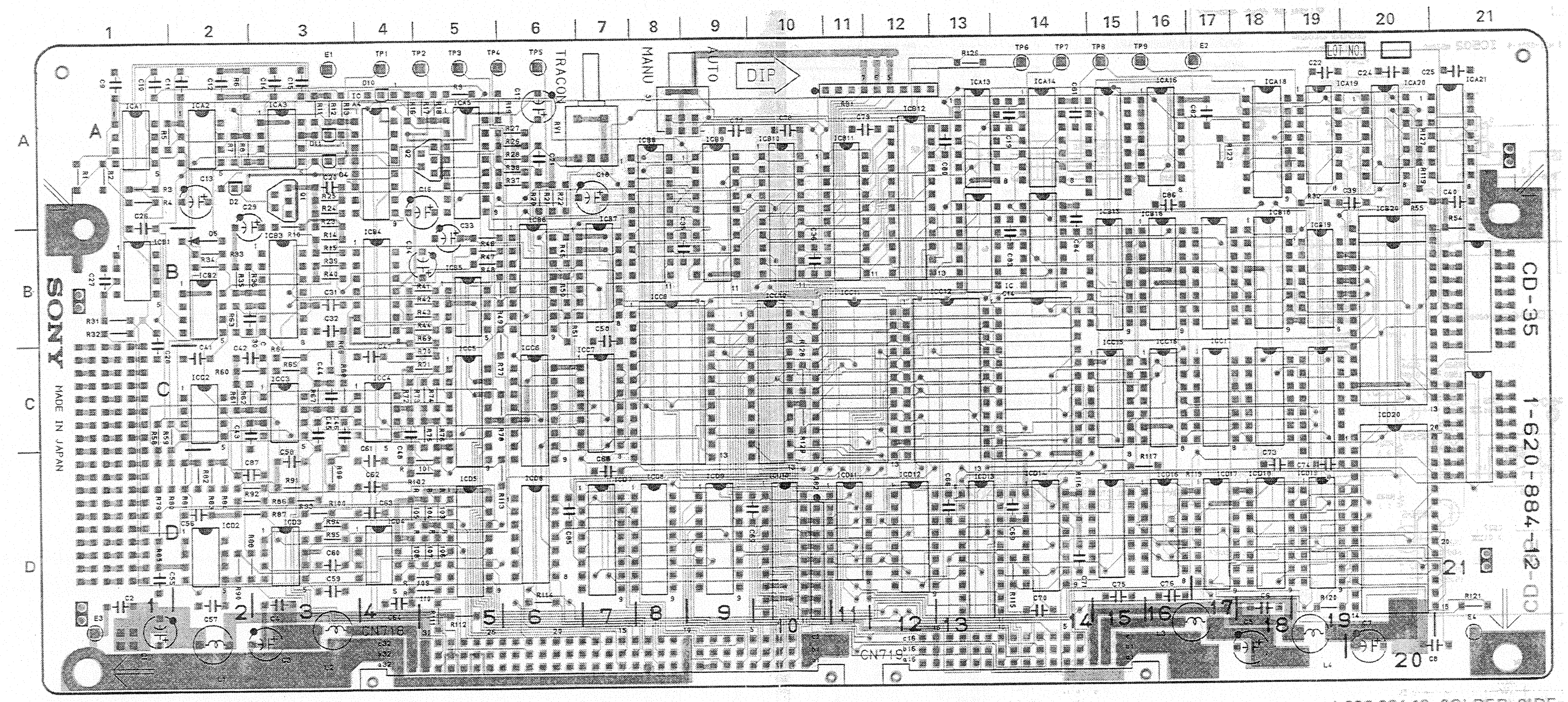

IC501 M5238P
IC504 HI1-0201-5
Q501 2SC2690A
Q502 2SA1220A
TP501
TP503
CUE ERS HEAD (X) C8c
CUE ERS HEAD (Y) C8b
CUE ERS HEAD (G) C8a
CUE ERASE HEAD
411 SN74HC02N IC412 SN7406N
RV501: CUE ERASE LEVEL
LV501: CUE ERASE RESONANCE
IC501 M5238P
IC504 HI1-0201-5 IC502 M5238P
Q503 2SC2690A
Q504 2SA1220A
TP505
TP507
TC ERS HEAD (X) B5c
TC ERS HEAD (Y) B5b
TC ERS HEAD (G) B5a
TC ERASE HEAD
IC416 SN74HC04N IC412 SN7406N
IC411 SN74HC02N
RV502: TC ERASE LEVEL
LV502: TC ERASE RESONANCE
IC503 M5238P
IC504 HI1-0201-5
Q507 2SC2655
Q505 2SA1175
Q506 2SC2785
Q508 2SA1020-Y
TP509
TP511
FULL CTL HEAD (X) C2c
FULL CTL HEAD (Y) C2b
FULL CTL HEAD (G) C2a
FULL ERASE HEAD
IC411 SN74HC02N IC412 SN7406N
RV503: FULL CTL ERASE LEVEL
LV503: FULL CTL ERASE RESONANCE
E501
IC419 NJM78L09A
IC602 NJM78L05A
IC420 NJM79L09A
IC603 NJM79L05A
+9V
-9V
+2.5V
-5V
+5V
404, 409,
20
ΞE CONNECTORS
IN NO.
ONNECTOR NO.
: CN713
: CN714
: CN715
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN713
B: CN714
C: CN715

AE-05 BOARD (2/2)

BOARD NO. 1-620-891-12
DVR-1000 (J) : #10601-
DVR-1000 (U/C) : #10701-
DVR-1000 (EK) : #10701-

CD-35 BOARD (1-620-884-12)

Component Side


1
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14
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16
17
18
19
20
21
A
B
C
D
SONY
MADE IN JAPAN
TRACON
MANU
AUTO
DIP
LOT NO
CD-35 1-620-884-12-00
CN716
CN718
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
E1
E2
E3
E4

1-620-884-12 COMPONENT SIDE

1-620-884-12 SOLDER SIDE

CD-35 BOARD CARD RACK

CD-35 (1-620-884-12)

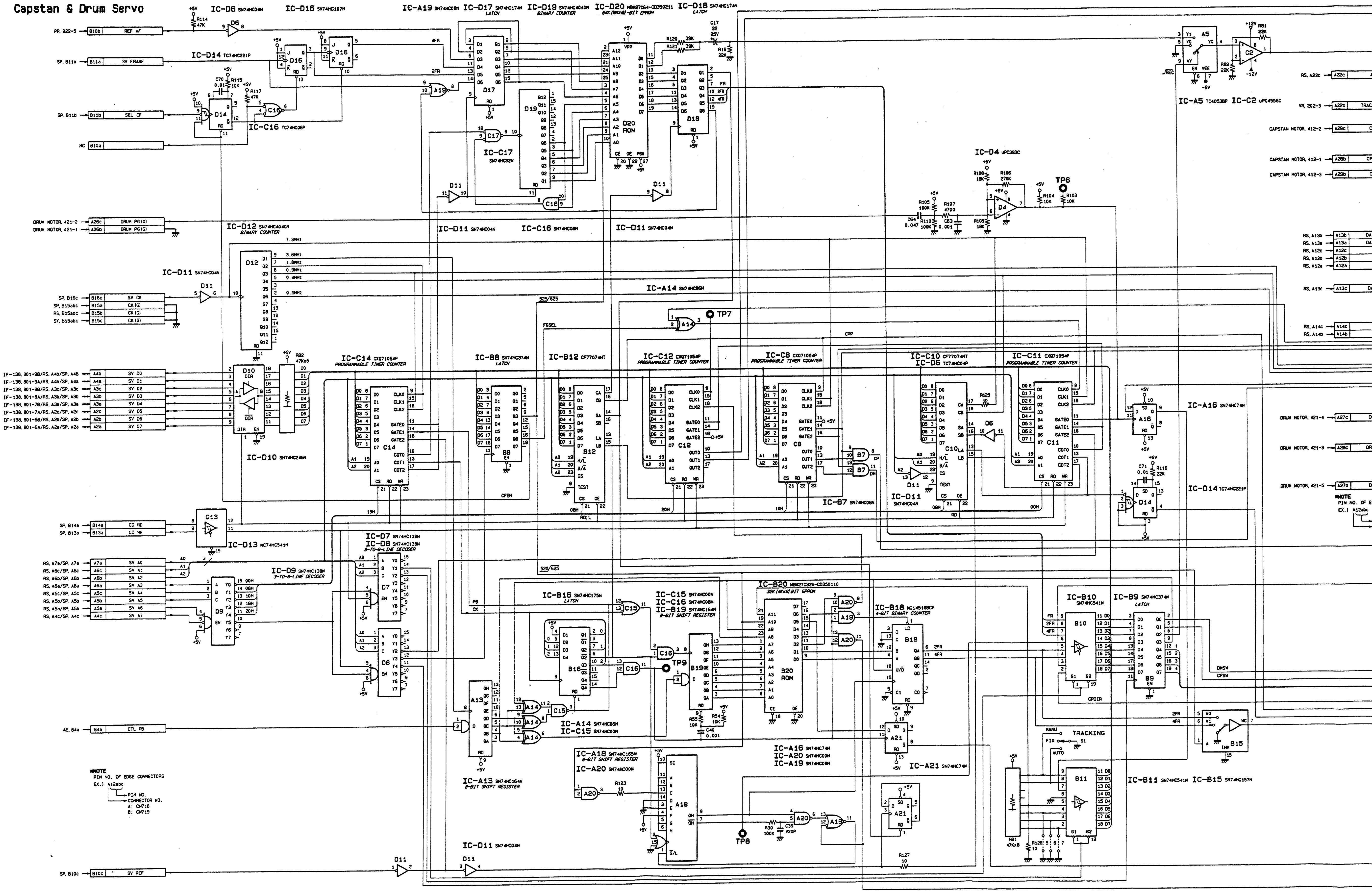
DVR-1000

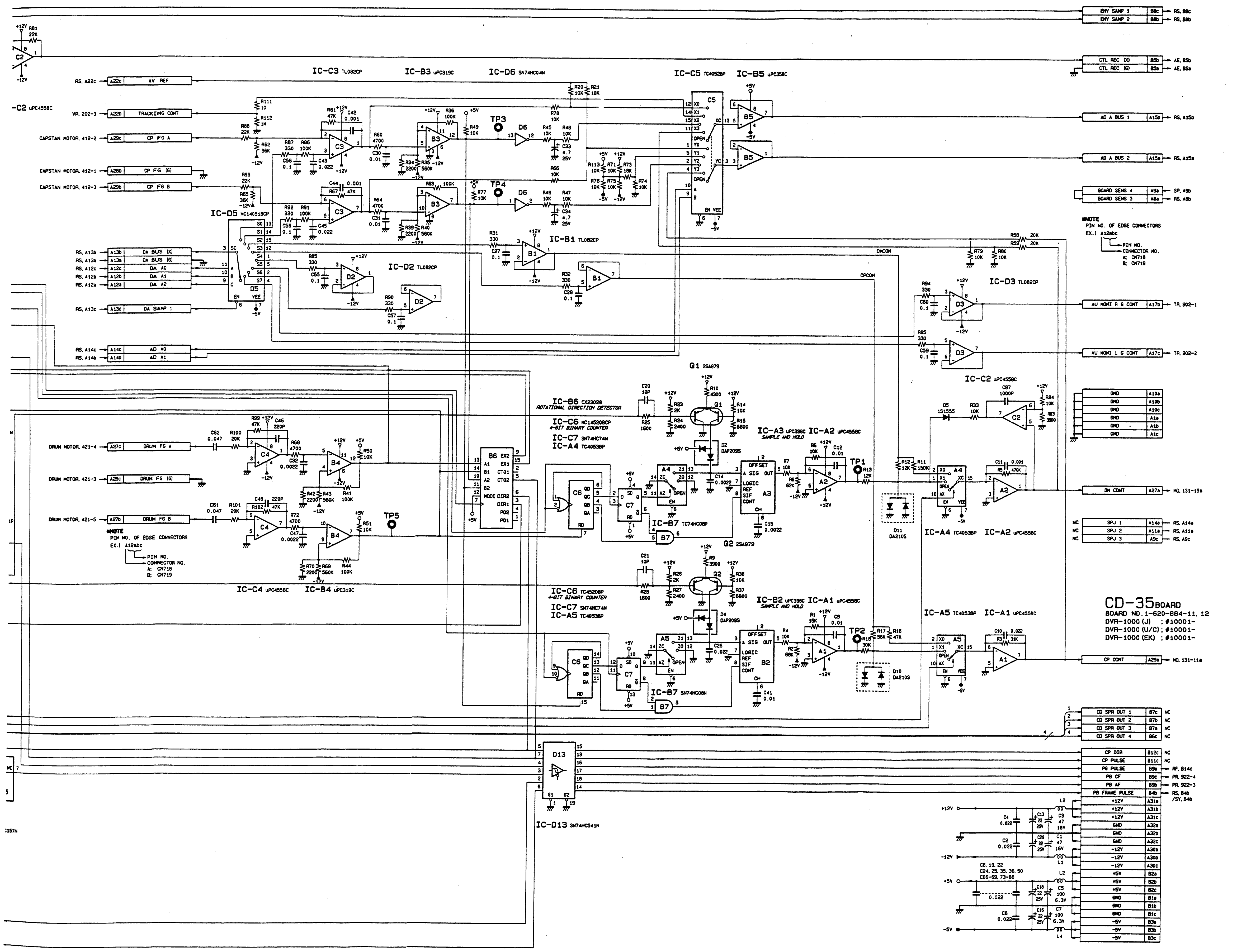
CN718M	D5
CN719M	D14
D2	A2
D4	A3
D5	B2
D10	A4
D11	A3
E1	A3
E2	A17
E3	D1
E4	D21
Q1	A3
Q2	A5
RB1	A12
RV1	A7
S1	A8
TP1	A4
TP2	A5
TP3	A5
TP4	A6
TP5	A6
TP6	A14
TP7	A14
TP8	A15
TP9	A16

Ref. No.	Pin No.				
	+12V	+5V	GND	−5V	−12V
IC A1	8				4
IC A2	8				4
IC A3	1		7		4
IC A4		16	8	7	
IC A5		16	8	7	
IC A13		14	7		
IC A14		14	7		
IC A16		14	7		
IC A18		4	3, 14		
IC A19		14	7		
IC A20		14	7		
IC A21		14	7		
IC B1	8				4
IC B2	1		7		4
IC B3	11		3, 8		6
IC B4	11		3, 8		6
IC B5		8		4	
IC B6		16	8		
IC B7		14	7		
IC B8		20	10		
IC B9		20	10		
IC B10		20	10		
IC B11		20	10		
IC B12		24	12		
IC B15		16	8		
IC B16		16	8		
IC B18		16	8		
IC B19		14	7		
IC B20		24	12		
IC C2	8				4
IC C3	8				4
IC C4	8				4
IC C5		16	8	7	
IC C6		16	8		
IC C7		14	7		
IC C8		24	12		
IC C10		24	12		
IC C11		24	12		
IC C12		24	12		
IC C14		24	12		
IC C15		14	7		
IC C16		14	7		
IC C17		14	7		
IC D2	8				4
IC D3	8				4
IC D4		8	4		
IC D5		16	8	7	
IC D6		14	7		
IC D7		16	8		
IC D8		16	8		
IC D9		16	8		
IC D10		20	10		
IC D11		14	7		
IC D12		16	8		
IC D13		20	10		
IC D14		16	8		
IC D16		14	7		
IC D17		16	8		
IC D18		16	8		
IC D19		16	8		
IC D20		1, 28	14		

CD-35 BOARD

Capstan & Drum Servo


IC-D6 SN74HC04N
IC-D16 SN74HC107N
IC-A19 SN74HC08N
IC-D17 SN74HC174N LATCH
IC-D19 SN74HC4040N BINARY COUNTER
IC-D20 MBM27C64-CD350211 64K(8Kx8)-BIT EPROM
IC-D18 SN74HC174N LATCH
IC-D14 TC74HC221P
IC-C16 TC74HC08P
IC-C17 SN74HC32N
IC-D11 SN74HC04N
IC-C16 SN74HC08N
IC-D12 SN74HC4040N BINARY COUNTER
IC-A5 TC4053BP
IC-C2 uPC4558C
IC-D4 uPC393C
TP6
TP7
TP8
TP9
IC-A14 SN74HC86N
IC-C14 CXD71054P PROGRAMMABLE TIMER COUNTER
IC-B8 SN74HC374N LATCH
IC-B12 CF77074NT
IC-C12 CXD71054P PROGRAMMABLE TIMER COUNTER
IC-C8 CXD71054P PROGRAMMABLE TIMER COUNTER
IC-C10 CF77074NT
IC-D6 TC74HC04P
IC-C11 CXD71054P PROGRAMMABLE TIMER COUNTER
IC-A16 SN74HC74N
IC-D14 TC74HC221P
IC-D10 SN74HC245N
IC-B7 SN74HC08N
IC-D11 SN74HC04N
IC-D13 HC74HC541N
IC-D7 SN74HC138N
IC-D8 SN74HC138N 3-TO-8-LINE DECODER
IC-D9 SN74HC138N 3-TO-8-LINE DECODER
IC-B16 SN74HC175N LATCH
IC-C15 SN74HC00N
IC-C16 SN74HC08N
IC-B19 SN74HC164N 8-BIT SHIFT REGISTER
IC-B20 MBM27C32A-CD350110 32K(4Kx8)BIT EPROM
IC-B18 MC14516BCP 4-BIT BINARY COUNTER
IC-B10 SN74HC541N
IC-B9 SN74HC374N LATCH
IC-A13 SN74HC164N 8-BIT SHIFT REGISTER
IC-A14 SN74HC86N
IC-C15 SN74HC00N
IC-A18 SN74HC165N 8-BIT SHIFT REGISTER
IC-A20 SN74HC00N
IC-A16 SN74HC74N
IC-A20 SN74HC00N
IC-A19 SN74HC08N
IC-A21 SN74HC74N
IC-B11 SN74HC541N
IC-B15 SN74HC157N
TRACKING
MANU
FIX
AUTO
S1
PR, 922-5 B10b REF AF
SP, B11a B11a SV FRAME
SP, B11b B11b SEL CF
NC B10a
DRUM MOTOR, 421-2 A26c DRUM PG(X)
DRUM MOTOR, 421-1 A26b DRUM PG(G)
SP, B16c B16c SV CK
SP, B15abc B15a CK(G)
RS, B15abc B15b CK(G)
SY, B15abc B15c CK(G)
IF-138, 801-9B/RS, A4b/SP, A4B A4b SV D0
IF-138, 801-9A/RS, A4a/SP, A4a A4a SV D1
IF-138, 801-8B/RS, A3c/SP, A3c A3c SV D2
IF-138, 801-8A/RS, A3b/SP, A3b A3b SV D3
IF-138, 801-7B/RS, A3a/SP, A3a A3a SV D4
IF-138, 801-7A/RS, A2c/SP, A2c A2c SV D5
IF-138, 801-6B/RS, A2b/SP, A2b A2b SV D6
IF-138, 801-6A/RS, A2a/SP, A2a A2a SV D7
SP, B14a B14a CD RD
SP, B13a B13a CD WR
RS, A7a/SP, A7a A7a SV A0
RS, A6c/SP, A6c A6c SV A1
RS, A6b/SP, A6b A6b SV A2
RS, A6a/SP, A6a A6a SV A3
RS, A5c/SP, A5c A5c SV A4
RS, A5b/SP, A5b A5b SV A5
RS, A5a/SP, A5a A5a SV A6
RS, A4c/SP, A4c A4c SV A7
AE, B4a B4a CTL PB
SP, B10c B10c SV REF
RS, A22c A22c
VR, 202-3 A22b TRAC
CAPSTAN MOTOR, 412-2 A29c
CAPSTAN MOTOR, 412-1 A28b
CAPSTAN MOTOR, 412-3 A29b
RS, A13b A13b
RS, A13a A13a
RS, A12c A12c
RS, A12b A12b
RS, A12a A12a
RS, A13c A13c
RS, A14c A14c
RS, A14b A14d
DRUM MOTOR, 421-4 A27c
DRUM MOTOR, 421-3 A28c
DRUM MOTOR, 421-5 A27b
7.3MHz
3.6MHz
1.8MHz
0.9MHz
0.4MHz
0.1MHz
525/625
FSEL
CPP
CFEN
CPDIR
DMSW
CPSW
2FR
4FR
FR
R114 47K
R115 10K
R117 47K
C70 0.01
R120 39K
R121 39K
C17 22 25V
R19 22K
R81 22K
R82 22K
R105 100K
R107 4700
R106 270K
R108 18K
R109 18K
R110 100K
R104 10K
R103 10K
C64 0.047
C63 0.001
C71 0.01
R116 22K
R82 47Kx8
R55 10K
R54 10K
C40 0.001
R123 10
R30 100K
C39 220P
R127 10
R81 47Kx8
R126 10
+5V
+12V
-12V
-5V
NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN718
B: CN719

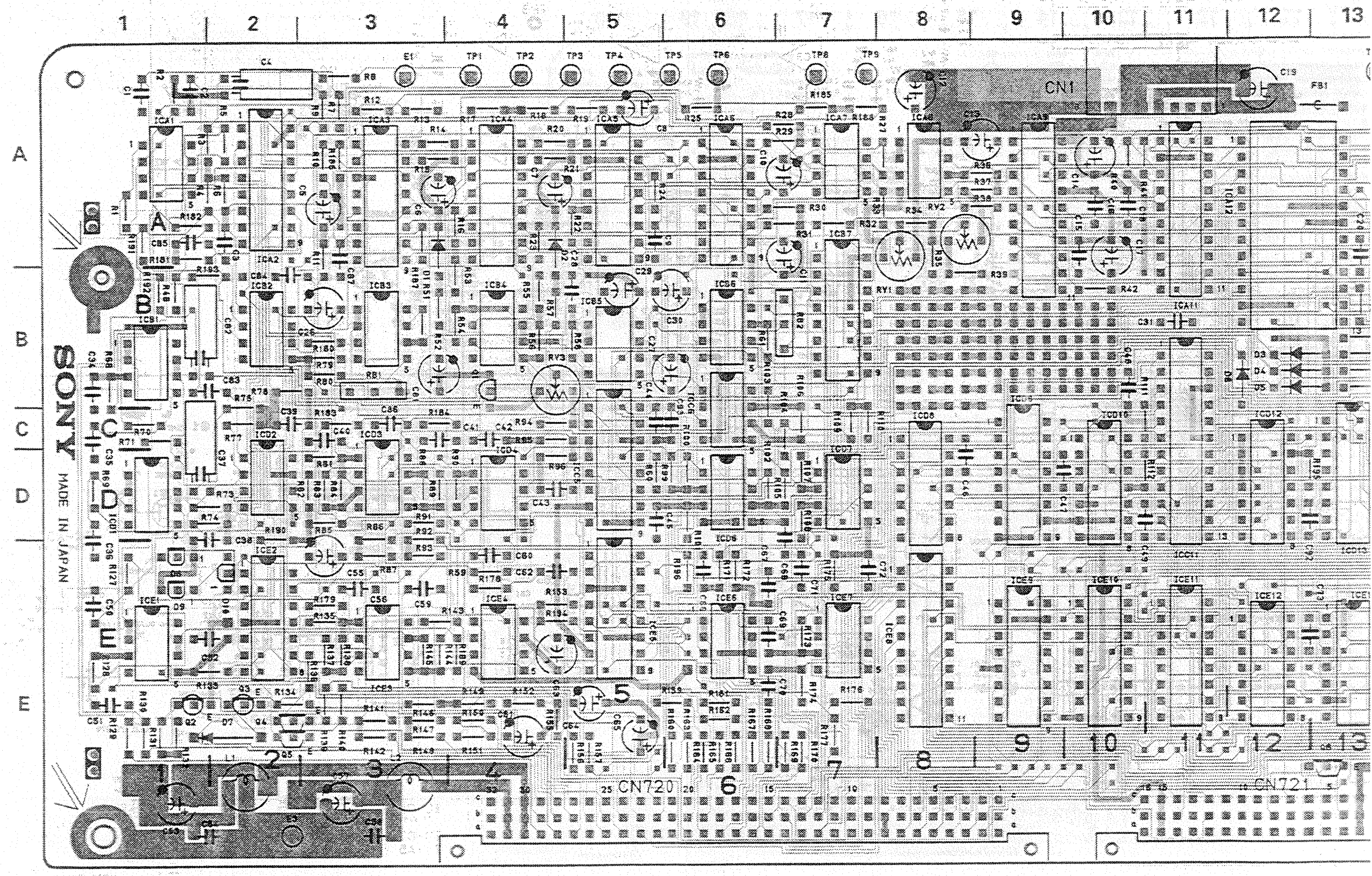

IC-C3 TL082CP
IC-B3 uPC319C
IC-D6 SN74HC04N
IC-C5 TC4052BP
IC-B5 uPC358C
-C2 uPC4558C
IC-D5 MC14051BCP
IC-B1 TL082CP
IC-D2 TL082CP
IC-D3 TL082CP
IC-C2 uPC4558C
TP1
TP2
TP3
TP4
TP5
Q1 2SA979
Q2 2SA979
IC-B6 CX23028 ROTATIONAL DIRECTION DETECTOR
IC-C6 MC14520BCP 4-BIT BINARY COUNTER
IC-C7 SN74HC74N
IC-A4 TC4053BP
IC-A3 uPC398C SAMPLE AND HOLD
IC-A2 uPC4558C
IC-B7 TC74HC08P
IC-C4 uPC4558C
IC-B4 uPC319C
IC-C6 TC4520BP 4-BIT BINARY COUNTER
IC-C7 SN74HC74N
IC-A5 TC4053BP
IC-B2 uPC398C SAMPLE AND HOLD
IC-A1 uPC4558C
IC-B7 SN74HC08N
IC-A4 TC4053BP
IC-A2 uPC4558C
IC-A5 TC4053BP
IC-A1 uPC4558C
IC-D13 SN74HC541N
D11 DA210S
D10 DA210S
D2 DAP209S
D4 DAP209S
DMCON
CPCON
RS, A22c A22c AV REF
VR, 202-3 A22b TRACKING CONT
CAPSTAN MOTOR, 412-2 A29c CP FG A
CAPSTAN MOTOR, 412-1 A28b CP FG (G)
CAPSTAN MOTOR, 412-3 A29b CP FG B
RS, A13b A13b DA BUS (X)
RS, A13a A13a DA BUS (G)
RS, A12c A12c DA A0
RS, A12b A12b DA A1
RS, A12a A12a DA A2
RS, A13c A13c DA SAMP 1
RS, A14c A14c AD A0
RS, A14b A14b AD A1
DRUM MOTOR, 421-4 A27c DRUM FG A
DRUM MOTOR, 421-3 A28c DRUM FG (G)
DRUM MOTOR, 421-5 A27b DRUM FG B
ENV SAMP 1 B8c RS, B8c
ENV SAMP 2 B8b RS, B8b
CTL REC (X) B5b AE, B5b
CTL REC (G) B5a AE, B5a
AD A BUS 1 A15b RS, A15b
AD A BUS 2 A15a RS, A15a
BOARD SENS 4 A9a SP, A9b
BOARD SENS 3 A8a RS, A8b
AU MONI R G CONT A17b TR, 902-1
AU MONI L G CONT A17c TR, 902-2
GND A10a
GND A10b
GND A10c
GND A1a
GND A1b
GND A1c
DM CONT A27a MO, 131-13a
NC SPJ 1 A14a RS, A14a
NC SPJ 2 A11a RS, A11a
NC SPJ 3 A9c RS, A9c
CP CONT A29a MO, 131-11a
CD SPR OUT 1 B7c NC
CD SPR OUT 2 B7b NC
CD SPR OUT 3 B7a NC
CD SPR OUT 4 B6c NC
CP DIR B12c NC
CP PULSE B11c NC
PG PULSE B9a RF, B14c
PB CF B9c PR, 922-4
PB AF B9b PR, 922-3
PB FRAME PULSE B4b RS, B4b /SY, B4b
+12V A31a
+12V A31b
+12V A31c
GND A32a
GND A32b
GND A32c
-12V A30a
-12V A30b
-12V A30c
+5V B2a
+5V B2b
+5V B2c
GND B1a
GND B1b
GND B1c
-5V B3a
-5V B3b
-5V B3c
C6, 19, 22
C24, 25, 35, 36, 50
C66-69, 73-86
0.022
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A; CN718
B; CN719

CD-35 BOARD

BOARD NO. 1-620-884-11, 12
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

RS-23 BOARD (1-620-885-13)

Component Side


1
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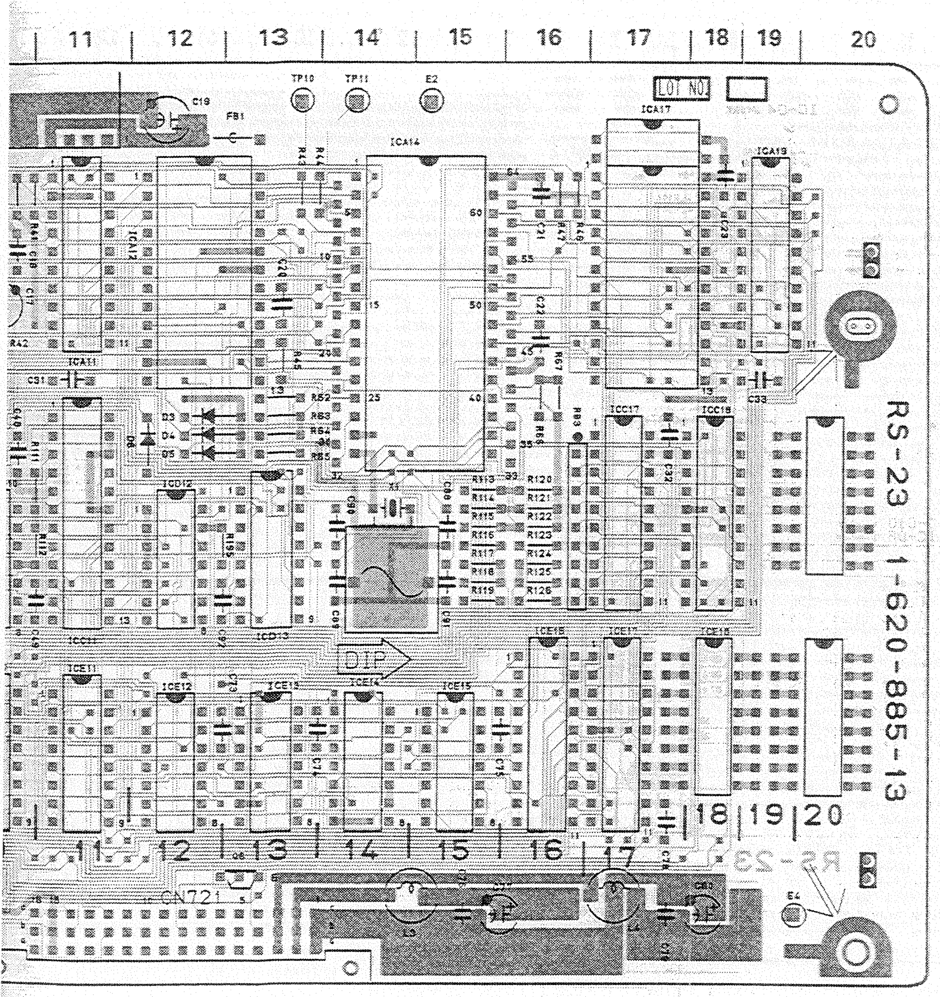
13
A
B
C
D
E
SONY
MADE IN JAPAN
CN1
CN720
CN721

1-620-885-13 COMPONENT SIDE


11
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13
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17
18
19
20
LOT NO.
RS-23 1-620-885-13
DIP
CN721
RS-23

1-620-885-13 SOLDER SIDE

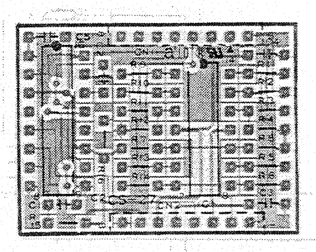
RS-23 (1-620-885-13)

DVR-1000

CN1M	A11
CN720M	E4
CN721M	E11
D1	A3
D2	A4
D3	B12
D4	B12
D5	B12
D6	B12
D7	E2
D8	E1
D9	E1
D10	E2
E1	A3
E2	A15
E3	E2
E4	E20
FB1	A13
Q1	B4
Q2	E1
Q3	E2
Q4	E2
Q5	E2
Q6	E13
RB1	B3
RB2	B7
RV1	A8
RV2	A8
RV3	B4
TP1	A4
TP2	A4
TP3	A5
TP4	A5
TP5	A6
TP6	A6
TP8	A7
TP9	A7
TP10	A13
TP11	A14
X1	C14

CS-27 BOARD (1-632-588-11)

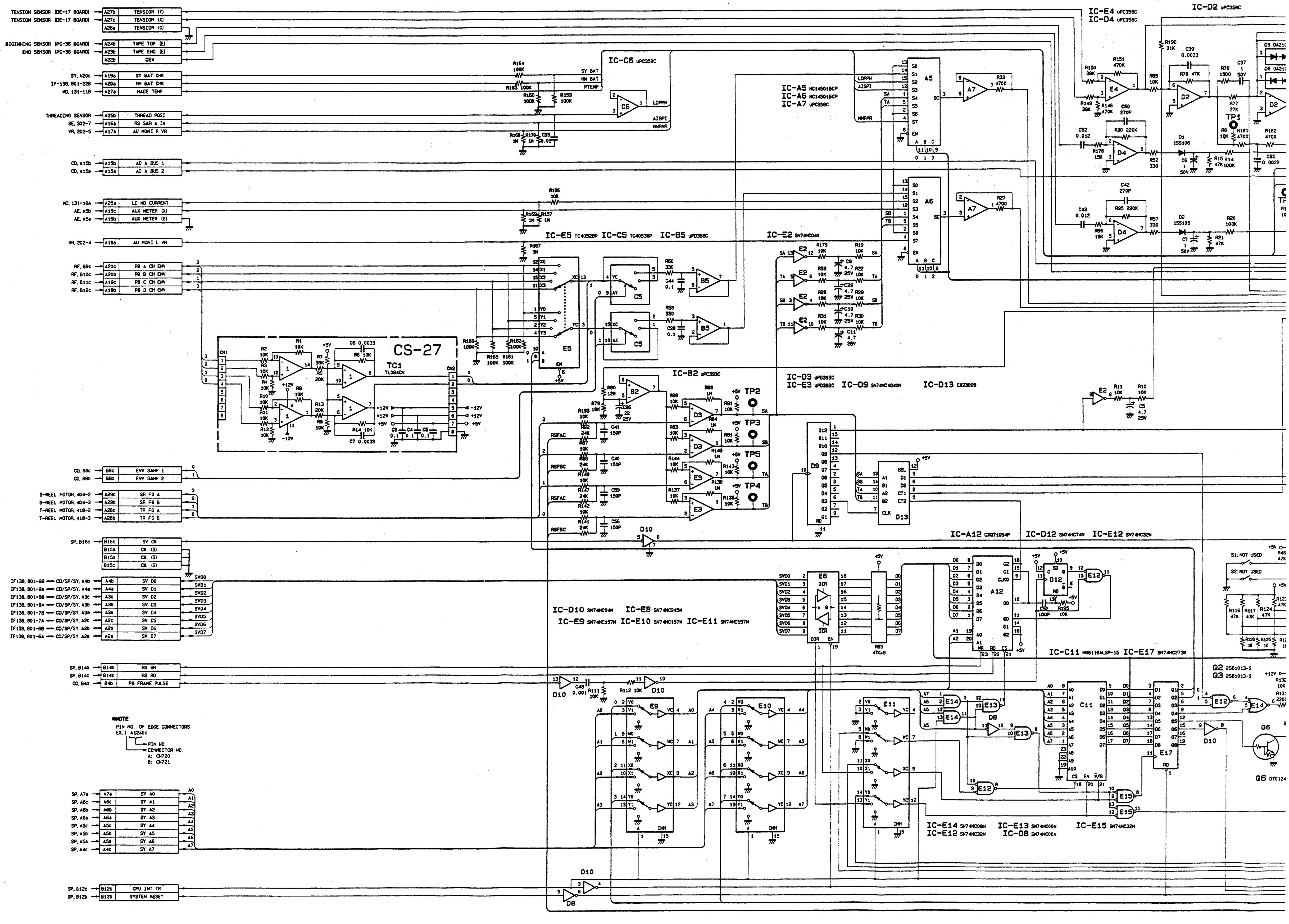
Component Side

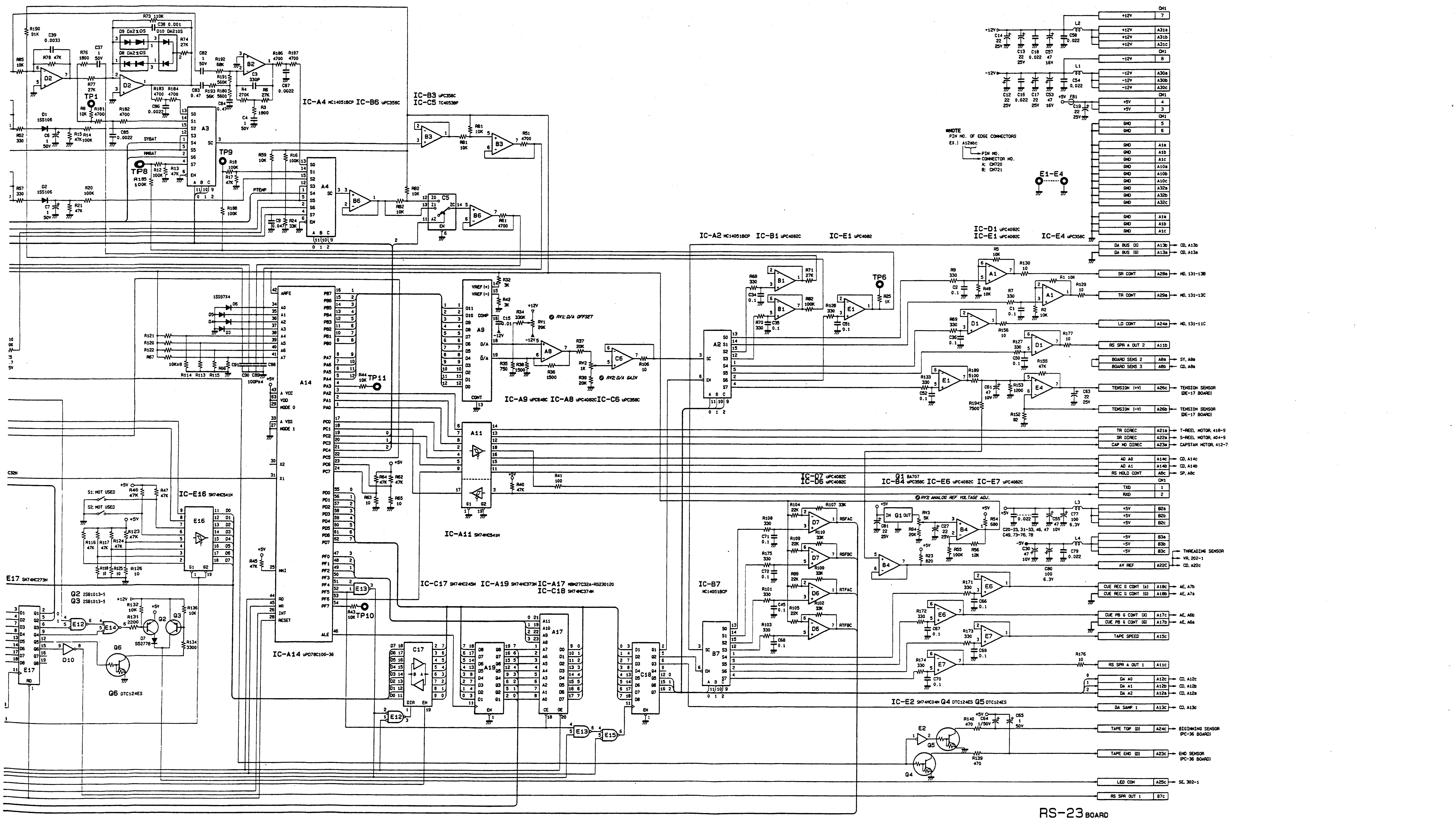


1-632-588-11 COMPONENT SIDE

1-632-588-11 SOLDER SIDE

RS-23 BOARD ; Reel Servo
CS-27 BOARD ; Auto Tracking

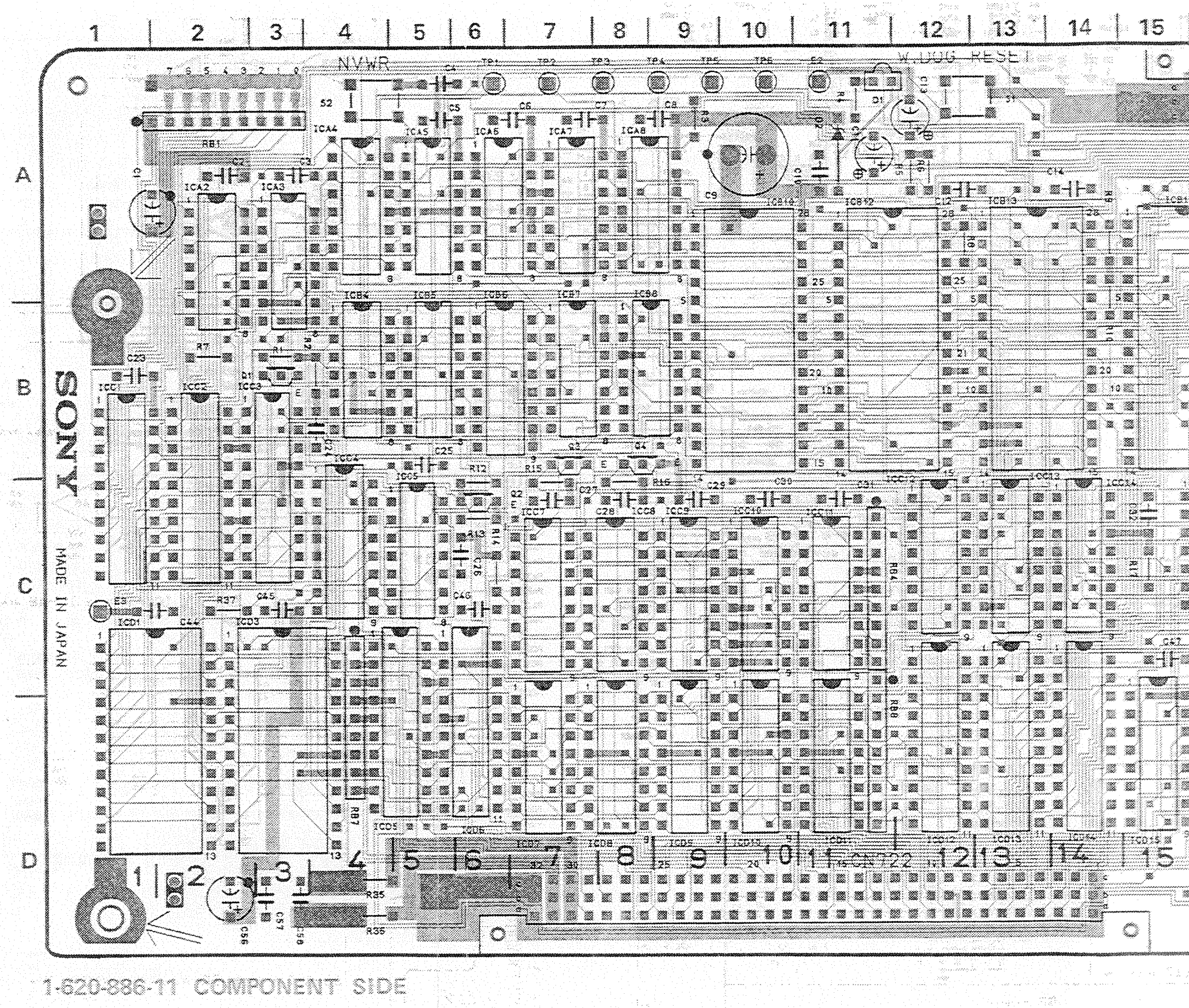

CS-27
TC1 TL084CN
IC-C6 uPC358C
IC-A5 MC14501BCP
IC-A6 MC14501BCP
IC-A7 uPC358C
IC-E4 uPC358C
IC-D4 uPC358C
IC-D2 uPC358C
IC-E5 TC4052BP IC-C5 TC4053BP IC-B5 uPC358C
IC-E2 SN74HC04N
IC-B2 uPC393C
IC-D3 uPD393C
IC-E3 uPD393C IC-D9 SN74HC4040N
IC-D13 CX23028
IC-A12 CX071054P IC-D12 SN74HC74N IC-E12 SN74HC32N
IC-D10 SN74HC04N IC-E8 SN74HC245N
IC-E9 SN74HC157N IC-E10 SN74HC157N IC-E11 SN74HC157N
IC-C11 HM6116ALSP-15 IC-E17 SN74HC273N
IC-E14 SN74HC08N IC-E13 SN74HC00N IC-E15 SN74HC32N
IC-E12 SN74HC32N IC-D8 SN74HC00N
Q2 2SB1013-5
Q3 2SB1013-5
Q6 DTC124
TP1
TP2
TP3
TP4
TP5
TENSION SENSOR (DE-17 BOARD)
BIGINNING SENSOR (PC-36 BOARD)
END SENSOR (PC-36 BOARD)
THREADING SENSOR
TENSION (Y)
TENSION (X)
TENSION (G)
TAPE TOP (E)
TAPE END (E)
DEW
SY BAT CHK
HM BAT CHK
MADE TEMP
THREAD POSI
RS SAR A IN
AU MONI R VR
AD A BUS 1
AD A BUS 2
LD MD CURRENT
AUX METER (X)
AUX METER (G)
AU MONI L VR
PB A CH ENV
PB B CH ENV
PB C CH ENV
PB D CH ENV
ENV SAMP 1
ENV SAMP 2
S-REEL MOTOR
T-REEL MOTOR
SR FG A
SR FG B
TR FG A
TR FG B
SV CK
CK (G)
SV D0
SV D1
SV D2
SV D3
SV D4
SV D5
SV D6
SV D7
RS WR
RS RD
PB FRAME PULSE
SY A0
SY A1
SY A2
SY A3
SY A4
SY A5
SY A6
SY A7
CPU INT TR
SYSTEM RESET
S1: NOT USED
S2: NOT USED
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN720
B: CN721


IC-D2 uPC358C
IC-A3 MC14051BCP IC-B2 uPC393C
IC-A4 MC14051BCP IC-B6 uPC358C
IC-B3 uPC358C
IC-C5 TC4053BP
TP1
TP8
TP9
TP6
TP10
TP11
A3
A4
A9
A11
A14
A17
A19
C17
C18
E16
E17
IC-A2 MC14051BCP IC-B1 uPC4082C
IC-E1 uPC4082
IC-D1 uPC4082C
IC-E1 uPC4082C
IC-E4 uPC358C
IC-A9 uPC648C IC-A8 uPC4082C IC-C6 uPC358C
RV1: D/A OFFSET
RV2: D/A GAIN
RV3: ANALOG REF VOLTAGE ADJ.
IC-A11 SN74HC541N
IC-E16 SN74HC541N
E17 SN74HC273N
S1: NOT USED
S2: NOT USED
Q2 2SB1013-5
Q3 2SB1013-5
Q6 DTC124ES
IC-A14 uPD78C10G-36
IC-C17 SN74HC245N IC-A19 SN74HC373N IC-A17 MBM27C32A-RS230120
IC-C18 SN74HC374N
IC-D7 uPC4082C
IC-D6 uPC4082C
Q1 BA707
IC-B4 uPC358C IC-E6 uPC4082C IC-E7 uPC4082C
IC-B7 MC14051BCP
IC-E2 SN74HC04N Q4 DTC124ES Q5 DTC124ES
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A; CN720
B; CN721
E1-E4
+12V 7
+12V A31a
+12V A31b
+12V A31c
-12V 8
-12V A30a
-12V A30b
-12V A30c
+5V 4
+5V 3
GND 5
GND 6
GND A1a
GND A1b
GND A1c
GND A10a
GND A10b
GND A10c
GND A32a
GND A32b
GND A32c
DA BUS (X) A13b CD, A13b
DA BUS (G) A13a CD, A13a
SR CONT A28a MD, 131-13B
TR CONT A29a MD, 131-13C
LD CONT A24a MD, 131-11C
RS SPR A OUT 2 A11b
BOARD SENS 2 A8a SY, A8a
BOARD SENS 3 A8b CD, A8a
TENSION (+V) A26c TENSION SENSOR (DE-17 BOARD)
TENSION (-V) A26b TENSION SENSOR (DE-17 BOARD)
TR DIREC A21a T-REEL MOTOR, 418-9
SR DIREC A22a S-REEL MOTOR, 404-9
CAP MD DIREC A23a CAPSTAN MOTOR, 412-7
AD A0 A14c CD, A14c
AD A1 A14b CD, A14b
RS HOLD CONT A8c SP, A8c
TXD 1
RXD 2
+5V B2a
+5V B2b
+5V B2c
-5V B3a
-5V B3b
-5V B3c
AV REF A22C THREADING SENSOR VR, 202-1 CD, A22c
CUE REC G CONT (X) A18c AE, A7b
CUE REC G CONT (G) A18b AE, A7a
CUE PB G CONT (X) A17c AE, A6b
CUE PB G CONT (G) A17b AE, A6a
TAPE SPEED A15c
RS SPR A OUT 1 A11c
DA A0 A12c CD, A12c
DA A1 A12b CD, A12b
DA A2 A12a CD, A12a
DA SAMP 1 A13c CD, A13c
TAPE TOP (D) A24c BIGINNING SENSOR (PC-36 BOARD)
TAPE END (D) A23c END SENSOR (PC-36 BOARD)
LED CON A25c SE, 302-1
RS SPR OUT 1 B7c

RS-23 BOARD
BOARD NO. 1-620-885-11, 12, 13
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

SP-01 BOARD (1-620-886-11)

Component Side


1
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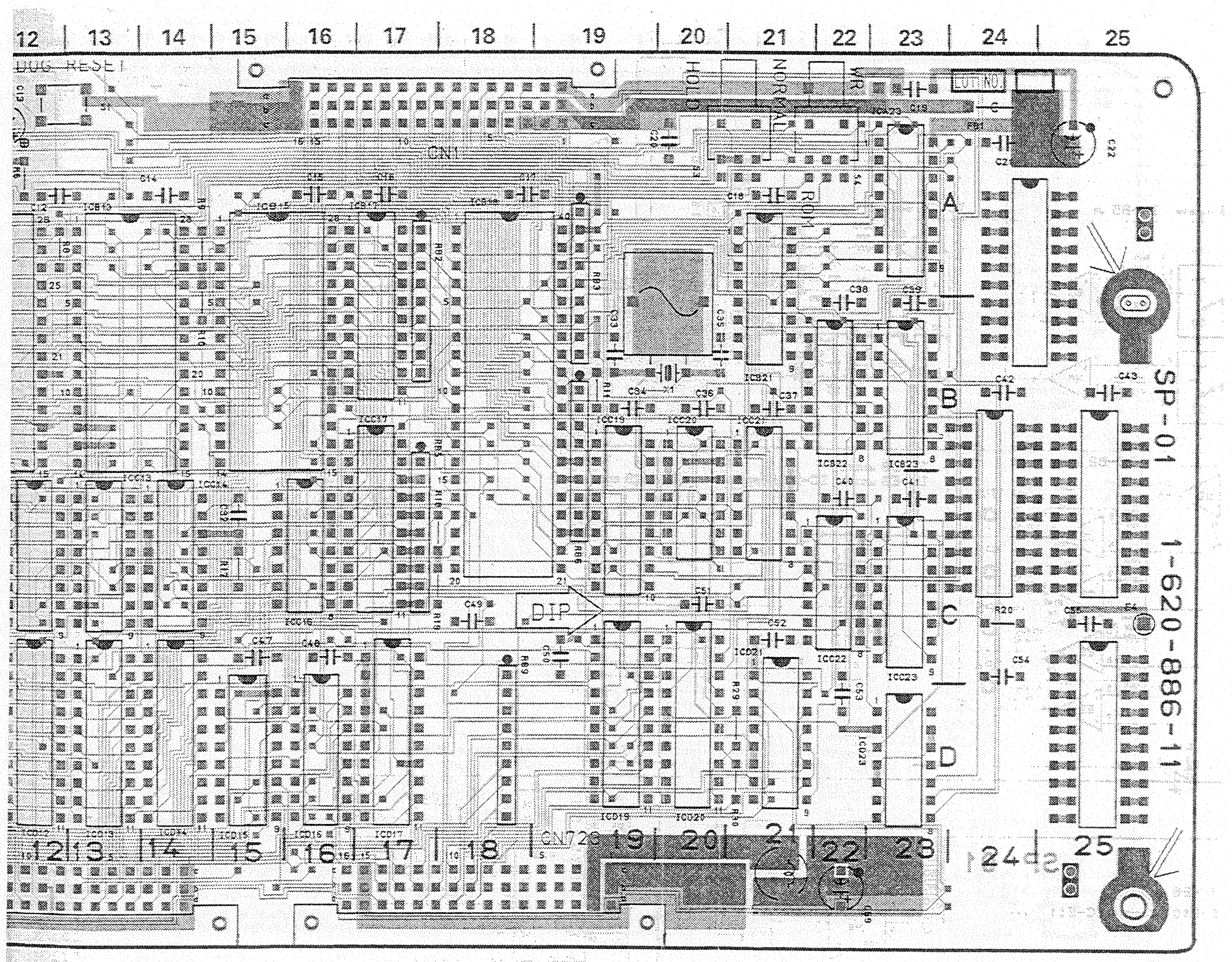
9
10
11
12
13
14
15
A
B
C
D
NVWR
W.DOG RESET
SONY
MADE IN JAPAN
CN722
1-620-886-11 COMPONENT SIDE



1-620-886-11 SOLDER SIDE

SP-01 (1-620-886-11)

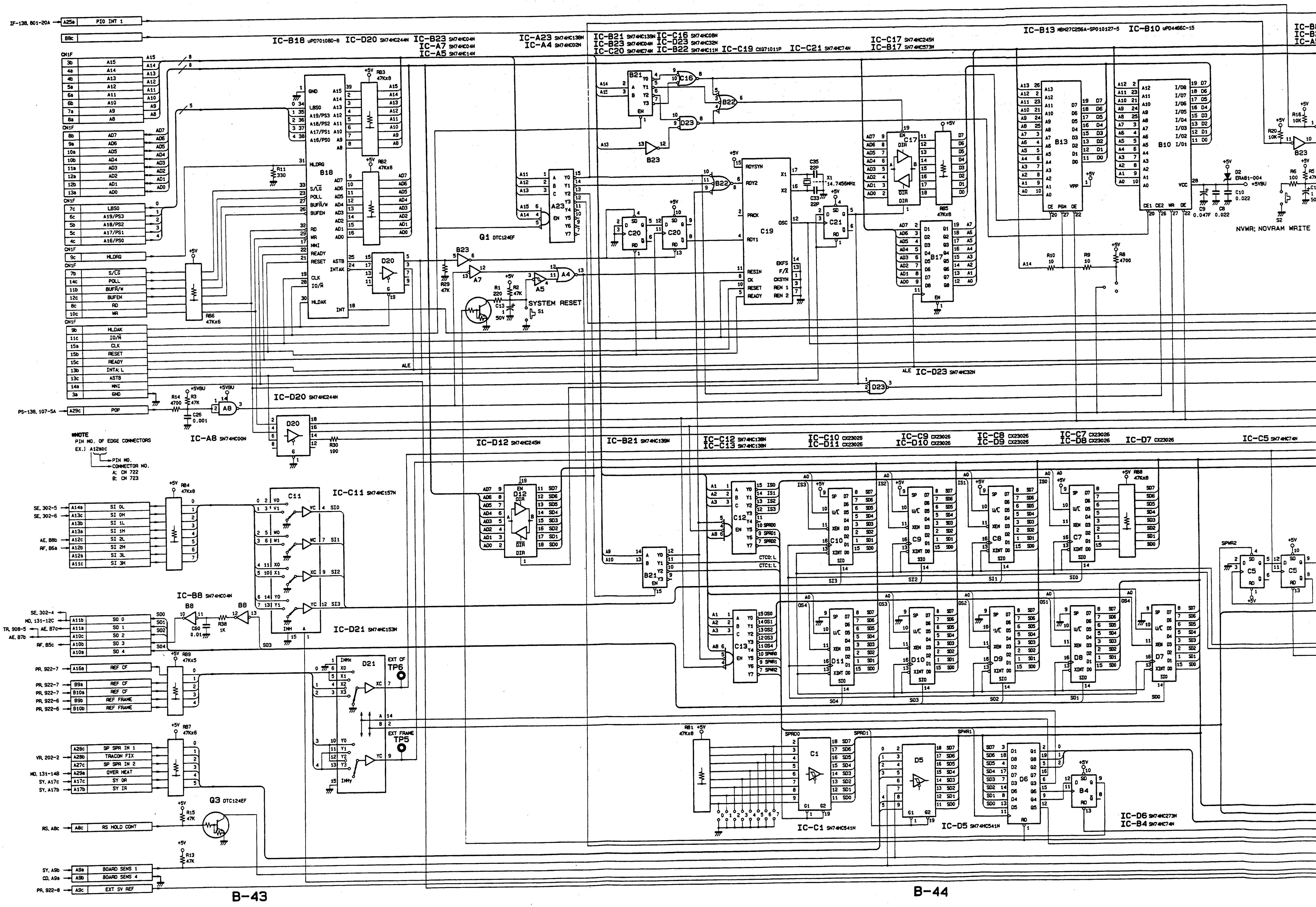
DVR-1000

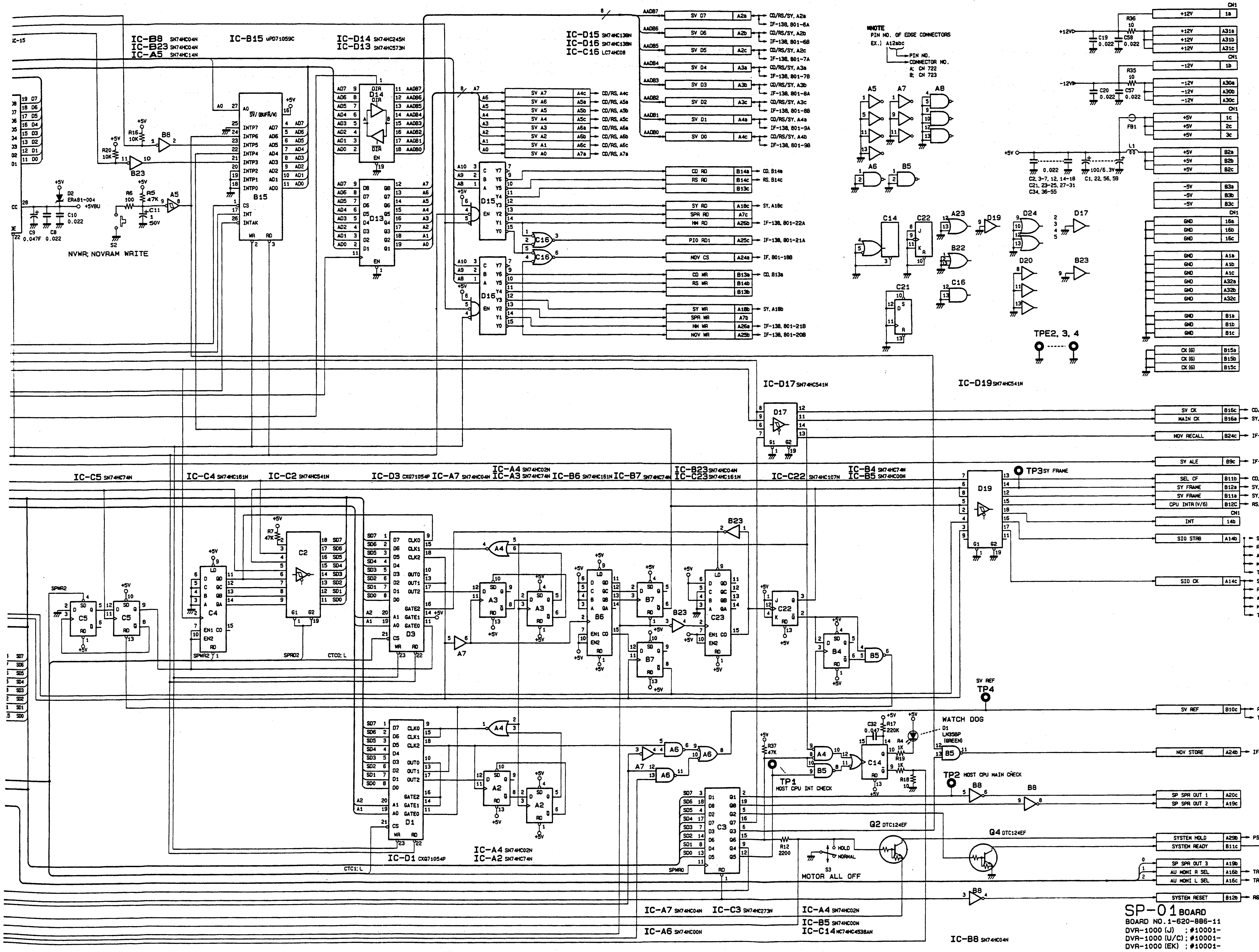
CN1F	A18
CN722M	D11
CN723M	D19
D1	A11
D2	A11
E2	A11
E3	C1
E4	C25
FB1	A24
Q1	B3
Q2	C6
Q3	B7
Q4	B8
RB1	A2
RB2	A17
RB3	A19
RB4	C11
RB5	C17
RB6	B19
RB7	D4
RB8	D11
RB9	D18
S1	A12
S2	A4
S3	A21
S4	A22
TP1	A6
TP2	A7
TP3	A8
TP4	A9
TP5	A9
TP6	A10
X1	B20

Ref. No.	Pin No.	
	+5V	GND
IC A2	14	7
IC A3	14	7
IC A4	14	7
IC A5	14	7
IC A6	14	7
IC A7	14	7
IC A8	14	7
IC A23	16	8
IC B4	14	7
IC B5	14	7
IC B6	16	8
IC B7	14	7
IC B8	14	7
IC B10	28	14
IC B12	28	14
IC B13	1, 28	14
IC B15	28	14
IC B17	20	10
IC B18	40	1, 20
IC B21	16	8
IC B22	14	7
IC B23	14	7
IC C1	20	10
IC C2	20	10
IC C3	20	10
IC C4	16	8
IC C5	14	7
IC C7	12	4
IC C8	12	4
IC C9	12	4
IC C10	12	4
IC C11	16	8
IC C12	16	8
IC C13	16	8
IC C14	16	8
IC C16	14	7
IC C17	20	10
IC C19	18	9
IC C20	14	7
IC C21	14	7
IC C22	14	7
IC C23	16	8
IC D1	24	12
IC D3	24	12
IC D5	20	10
IC D6	20	10
IC D7	12	4
IC D8	12	4
IC D9	12	4
IC D10	12	4
IC D11	12	4
IC D12	20	10
IC D13	20	10
IC D14	20	10
IC D15	16	8
IC D16	16	8
IC D17	20	10
IC D19	20	10
IC D20	20	10
IC D21	16	8
IC D23	14	7

SP-01 BOARD

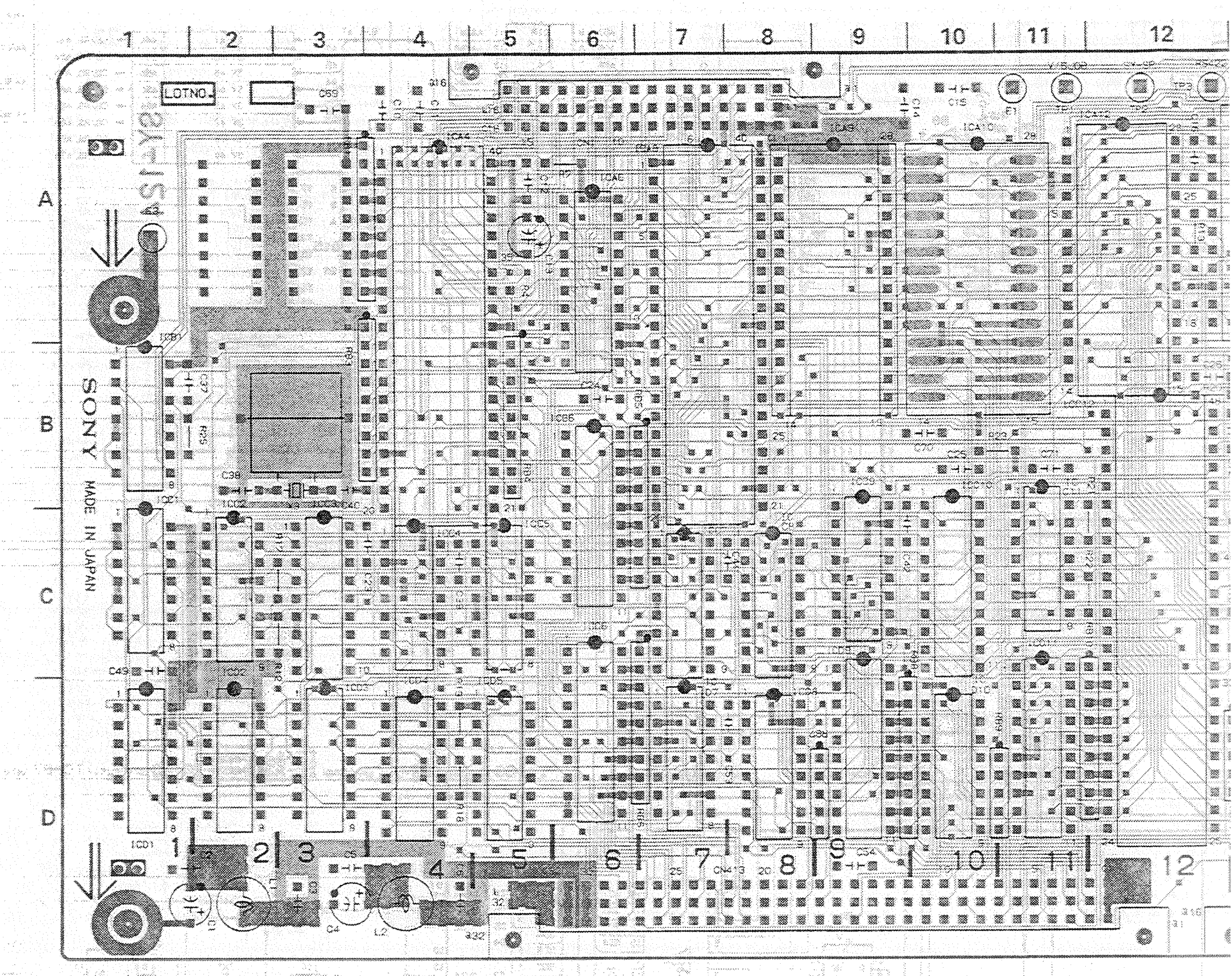
Servo Processor


IC-B18 uPD70108D-8
IC-D20 SN74HC244N
IC-B23 SN74HC04N
IC-A7 SN74HC04N
IC-A5 SN74HC14N
IC-A23 SN74HC138N
IC-A4 SN74HC02N
IC-B21 SN74HC139N
IC-B23 SN74HC04N
IC-C20 SN74HC74N
IC-C16 SN74HC08N
IC-D23 SN74HC32N
IC-B22 SN74HC11N
IC-C19 CXD71011P
IC-C21 SN74HC74N
IC-C17 SN74HC245N
IC-B17 SN74HC573N
IC-B13 MBM27C256A-SP010127-5
IC-B10 uPD4466C-15
IC-D23 SN74HC32N
IC-D20 SN74HC244N
IC-A8 SN74HC00N
IC-D12 SN74HC245N
IC-B21 SN74HC139N
IC-C12 SN74HC138N
IC-C13 SN74HC138N
IC-C10 CX23026
IC-D11 CX23026
IC-C9 CX23026
IC-D10 CX23026
IC-C8 CX23026
IC-D9 CX23026
IC-C7 CX23026
IC-D8 CX23026
IC-D7 CX23026
IC-C5 SN74HC74N
IC-C11 SN74HC157N
IC-B8 SN74HC04N
IC-D21 SN74HC153N
IC-C1 SN74HC541N
IC-D5 SN74HC541N
IC-D6 SN74HC273N
IC-B4 SN74HC74N
Q1 DTC124EF
Q3 DTC124EF
X1 14.7456MHz
SYSTEM RESET
S1
S2
NVWR: NOVRAM WRITE
D2 ERA81-004
TP6 EXT CF
TP5 EXT FRAME
IF-138, 801-20A
PS-138, 107-5A
A25a PIO INT 1
A29c POP
*NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A: CN 722
B: CN 723
SI 0L
SI 0H
SI 1L
SI 1H
SI 2L
SI 2H
SI 3L
SI 3H
SO 0
SO 1
SO 2
SO 3
SO 4
REF CF
REF FRAME
SP SPR IN 1
TRACON FIX
SP SPR IN 2
OVER HEAT
SY 0R
SY IR
RS HOLD CONT
BOARD SENS 1
BOARD SENS 4
EXT SV REF


IC-B8 SN74HC04N
IC-B23 SN74HC04N
IC-A5 SN74HC14N
IC-B15 uPD71059C
IC-D14 SN74HC245N
IC-D13 SN74HC573N
IC-D15 SN74HC138N
IC-D16 SN74HC138N
IC-C16 LC74HC08
NOTE
PIN NO. OF EDGE CONNECTORS
EX.) A12abc
PIN NO.
CONNECTOR NO.
A; CN 722
B; CN 723
NVWR; NOVRAM WRITE
ERA81-004
+5VBU
S2
TPE2, 3, 4
IC-D17 SN74HC541N
IC-D19 SN74HC541N
IC-C5 SN74HC74N
IC-C4 SN74HC161N
IC-C2 SN74HC541N
IC-D3 CXQ71054P
IC-A7 SN74HC04N
IC-A4 SN74HC02N
IC-A3 SN74HC74N
IC-B6 SN74HC161N
IC-B7 SN74HC74N
IC-B23 SN74HC04N
IC-C23 SN74HC161N
IC-C22 SN74HC107N
IC-B4 SN74HC74N
IC-B5 SN74HC00N
TP3 SY FRAME
SV REF
TP4
WATCH DOG
D1 LN358P (GREEN)
TP1 HOST CPU INT CHECK
TP2 HOST CPU MAIN CHECK
S3 MOTOR ALL OFF
HOLD
NORMAL
Q2 DTC124EF
Q4 DTC124EF
IC-D1 CXQ71054P
IC-A4 SN74HC02N
IC-A2 SN74HC74N
IC-A7 SN74HC04N
IC-C3 SN74HC273N
IC-A6 SN74HC00N
IC-A4 SN74HC02N
IC-B5 SN74HC00N
IC-C14 HC74HC4538AN
IC-B8 SN74HC04N
SV CK
MAIN CK
NOV RECALL
SY ALE
SEL CF
SY FRAME
CPU INTR (V/6)
INT
SIO STRB
SIO CK
SV REF
NOV STORE
SP SPR OUT 1
SP SPR OUT 2
SYSTEM HOLD
SYSTEM READY
SP SPR OUT 3
AU MONI R SEL
AU MONI L SEL
SYSTEM RESET
+12V
-12V
+5V
-5V
GND
CK (6)
CN1

SP-01 BOARD
BOARD NO. 1-620-886-11
DVR-1000 (J) ; #10001-
DVR-1000 (U/C) ; #10001-
DVR-1000 (EK) ; #10001-

SY-124 BOARD (1-624-858-12)
Component Side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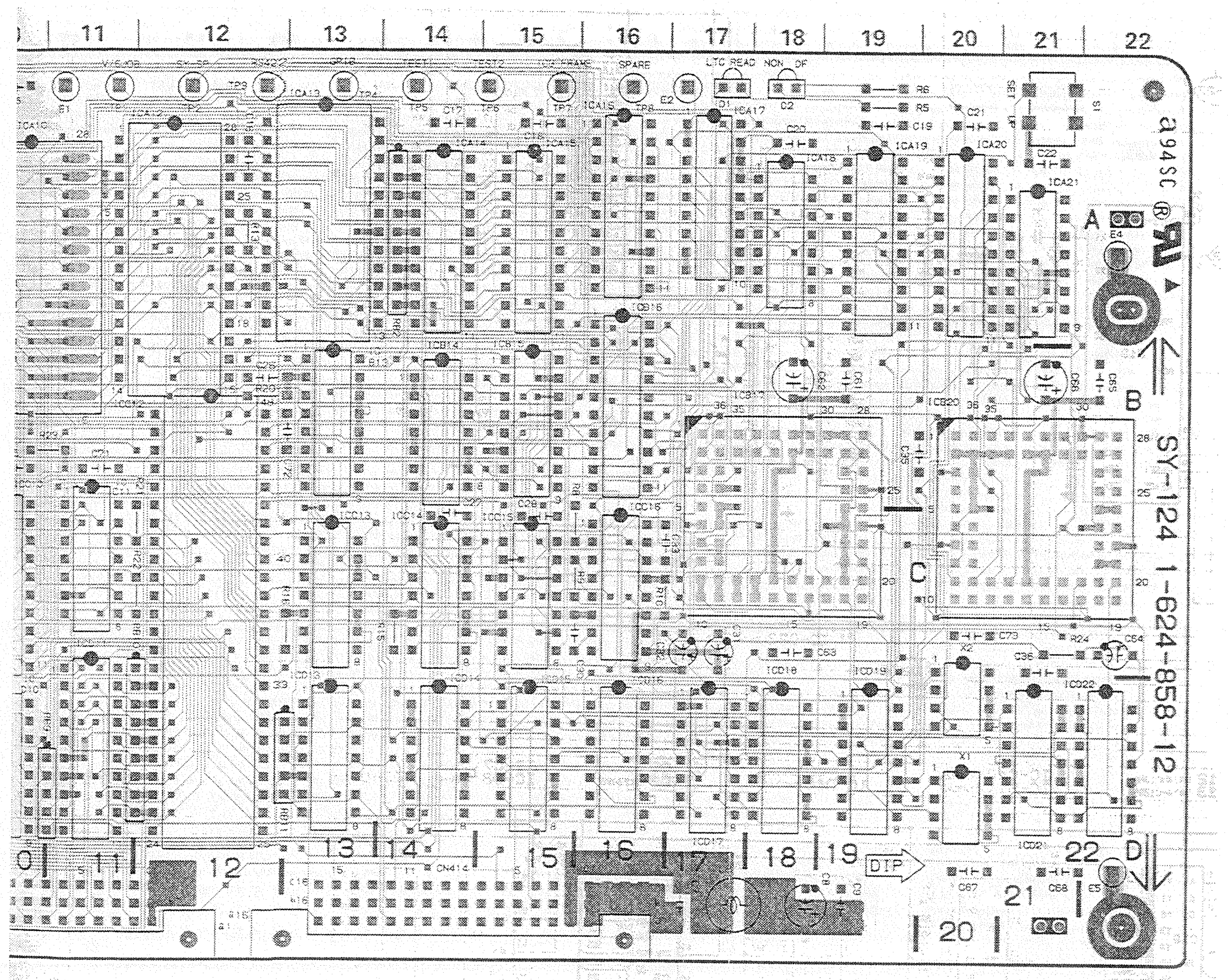
A
B
C
D
SONY
MADE IN JAPAN
LOTNO.

1-624-858-12 COMPONENT SIDE



1-624-858-12 SOLDER SIDE

SY-124 (1-624-858-12)	
DVR-10	
DVR-C10	
CN1	A6
CN413	D8
CN414	D14
D1	A17
D2	A18
E1	A11
E2	A17
E3	A1
E4	A22
E5	D22
RB1	A3
RB2	A14
RB3	B3
RB4	B5
RB5	B7
RB6	D7
RB7	D9
RB8	D9
RB9	D11
RB10	D12
RB11	D13
S1	A21
TP1	A11
TP2	A12
TP3	A12
TP4	A13
TP5	A14
TP6	A15
TP7	A15
TP8	A16
X1	D20
X2	D20

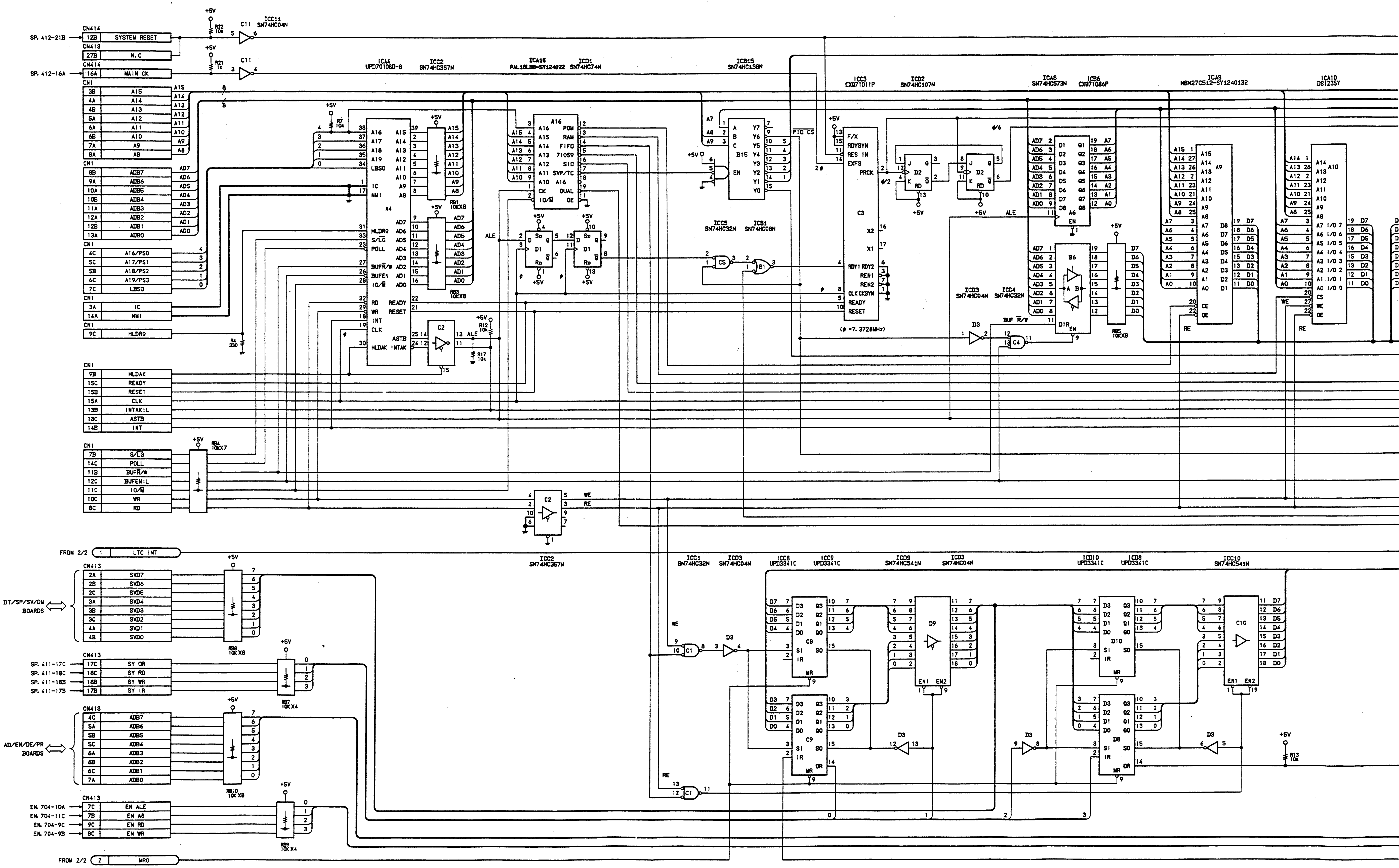
SY-124 BOARD

Ref. No.	Pin No.	
	+5V	GND
IC A4	40	1, 20
IC A6	20	10
IC A8	30	10
IC A9	28	14
IC A10	28	14
IC A12	28	14
IC A13	24	12
IC A14	20	10
IC A15	20	10
IC A16	20	10
IC A17	18	9
IC A18	14	7
IC A19	20	10
IC A20	20	10
IC A21	16	8
IC B1	14	7
IC B6	20	10
IC B13	16	8
IC B14	14	7
IC B15	16	8
IC B16	20	10
IC B17	47, 61	40, 54
IC B20	47, 61	40, 54
IC C1	14	7
IC C2	16	8
IC C3	18	9
IC C4	14	7
IC C5	14	7
IC C7	16	8
IC C8	16	8
IC C9	16	8
IC C10	20	10
IC C11	14	7
IC C13	14	7
IC C14	14	7
IC C15	14	7
IC C16	16	8
IC D1	14	7
IC D2	14	7
IC D3	14	7
IC D4	16	8
IC D5	16	8
IC D6	20	10
IC D7	14	7
IC D8	16	8
IC D9	20	10
IC D10	16	8
IC D13	14	7
IC D14	14	7
IC D15	14	7
IC D16	14	7
IC D17	14	7
IC D18	14	7
IC D19	14	7
IC D21	14	7
IC D22	14	7

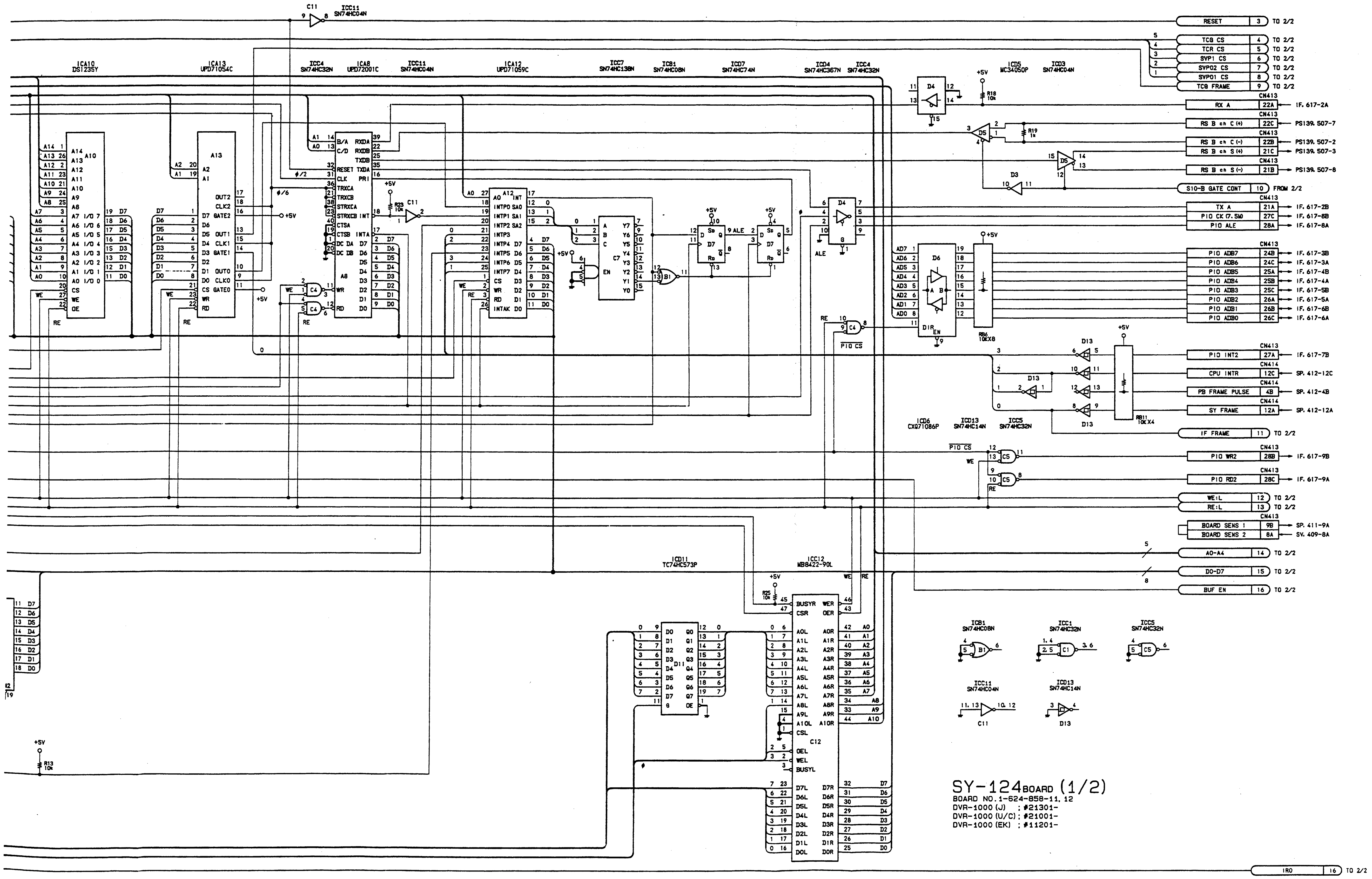
SY-124 BOARD (1/2)

System Controller

CARD RACK **SY-124 (1/2)** BOARD ▤ **SY-124 (1/2)** BOARD CARD RACK



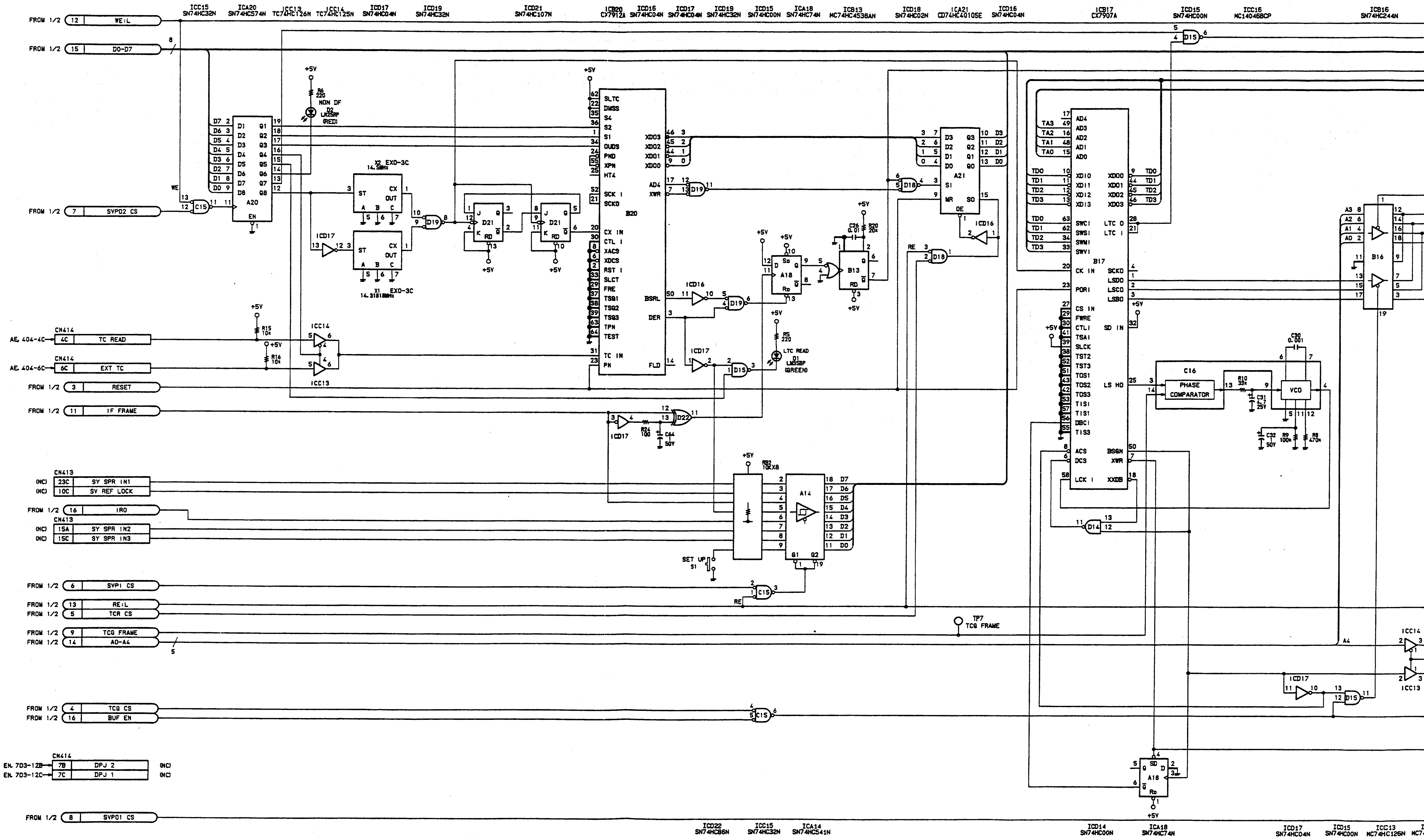
CN414
SP. 412-21B
12B SYSTEM RESET
CN413
27B N.C
SP. 412-16A
16A MAIN CK
CN1
3B A15
4A A14
4B A13
5A A12
6A A11
6B A10
7A A9
8A A8
8B ADB7
9A ADB6
10A ADB5
10B ADB4
11A ADB3
12A ADB2
12B ADB1
13A ADB0
4C A16/PS0
5C A17/PS1
5B A18/PS2
6C A19/PS3
7C LBS0
3A IC
14A NMI
9C HLDRQ
9B HLDAK
15C READY
15B RESET
15A CLK
13B INTAK:L
13C ASTB
14B INT
7B S/LG
14C POLL
11B BUFR/W
12C BUFEN:L
11C IO/M
10C WR
8C RD
RB4 10KX7
R4 330
R22 10k
R21 1k
C11
ICC11 SN74HC04N
ICA4 UPD70108D-8
ICC2 SN74HC367N
ICA16 PAL16L8B-SY124022
ICD1 SN74HC74N
ICB15 SN74HC138N
ICC3 CX07101 1P
ICD2 SN74HC107N
ICA6 SN74HC573N
ICB6 CX071086P
ICA9 MBM27C512-SY1240132
ICA10 DS1235Y
RB1 10KX8
RB3 10KX8
RB5 10KX8
R7 10k
R12 10k
R17 10k
PGM
RAM
FIFO
71059
SIO
SVP/TC
DUAL
OE
PIO CS
F/X
RDYSYN
RES IN
EXFS
PRCK
RDY1 RDY2
REN1
REN2
CLK CKSYN
READY
RESET
(ϕ =7.3728MHz)
ALE
BUF R/W
ICD3 SN74HC04N
ICC4 SN74HC32N
ICC5 SN74HC32N
ICB1 SN74HC08N
WE
RE
ICC2 SN74HC367N
FROM 2/2 1 LTC INT
FROM 2/2 2 MRO
DT/SP/SV/DM BOARDS
CN413
2A SVD7
2B SVD6
2C SVD5
3A SVD4
3B SVD3
3C SVD2
4A SVD1
4B SVD0
RB6 10K X8
SP. 411-17C 17C SY OR
SP. 411-18C 18C SY RD
SP. 411-18B 18B SY WR
SP. 411-17B 17B SY IR
RB7 10K X4
AD/EN/DE/PR BOARDS
4C ADB7
5A ADB6
5B ADB5
5C ADB4
6A ADB3
6B ADB2
6C ADB1
7A ADB0
RB10 10K X8
EN. 704-10A 7C EN ALE
EN. 704-11C 7B EN A8
EN. 704-9C 9C EN RD
EN. 704-9B 8C EN WR
RB9 10K X4
ICC1 SN74HC32N
ICD3 SN74HC04N
ICC8 UPD3341C
ICC9 UPD3341C
ICD9 SN74HC541N
ICD3 SN74HC04N
ICD10 UPD3341C
ICD8 UPD3341C
ICC10 SN74HC541N
SI SO
IR
MR
OR
EN1 EN2
R13 10k
+5V

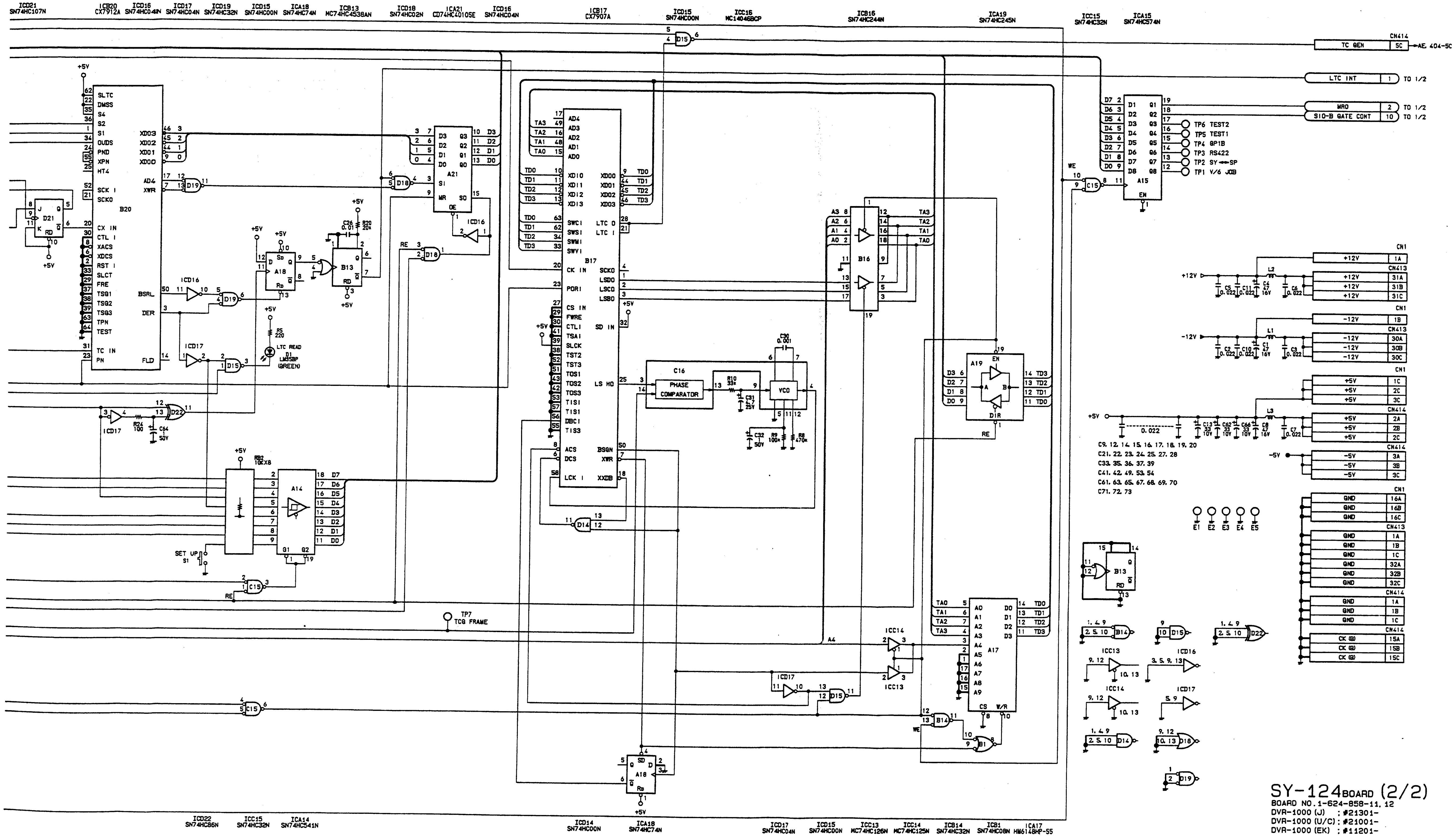

C11
ICC11 SN74HC04N
ICA10 DS1235Y
ICA13 UPD71054C
ICC4 SN74HC32N
ICA8 UPD72001C
ICC11 SN74HC04N
ICA12 UPD71059C
ICC7 SN74HC138N
ICB1 SN74HC08N
ICD7 SN74HC74N
ICD4 SN74HC367N
ICC4 SN74HC32N
ICD5 MC34050P
ICD3 SN74HC04N
ICD6 CXQ71086P
ICD13 SN74HC14N
ICC5 SN74HC32N
ICD11 TC74HC573P
ICC12 MB8422-90L
A10
A13
A8
A12
C7
B1
D7
D4
D5
D3
D6
D13
C4
C5
C12
D11
R18 10k
R19 1k
R23 10k
R25 10k
R13 10k
RB6 10KX8
RB11 10KX4
+5V
RESET 3 TO 2/2
TCG CS 4 TO 2/2
TCR CS 5 TO 2/2
SVP1 CS 6 TO 2/2
SVP02 CS 7 TO 2/2
SVP01 CS 8 TO 2/2
TCG FRAME 9 TO 2/2
CN413
RX A 22A IF. 617-2A
RS B ch C (+) 22C PS139. 507-7
RS B ch C (-) 22B PS139. 507-2
RS B ch S (+) 21C PS139. 507-3
RS B ch S (-) 21B PS139. 507-8
S10-B GATE CONT 10 FROM 2/2
TX A 21A IF. 617-2B
PIO CK (7.5M) 27C IF. 617-8B
PIO ALE 28A IF. 617-8A
PIO ADB7 24B IF. 617-3B
PIO ADB6 24C IF. 617-3A
PIO ADB5 25A IF. 617-4B
PIO ADB4 25B IF. 617-4A
PIO ADB3 25C IF. 617-5B
PIO ADB2 26A IF. 617-5A
PIO ADB1 26B IF. 617-6B
PIO ADB0 26C IF. 617-6A
PIO INT2 27A IF. 617-7B
CN414
CPU INTR 12C SP. 412-12C
PB FRAME PULSE 4B SP. 412-4B
SY FRAME 12A SP. 412-12A
IF FRAME 11 TO 2/2
PIO WR2 28B IF. 617-9B
PIO RD2 28C IF. 617-9A
WE:L 12 TO 2/2
RE:L 13 TO 2/2
BOARD SENS 1 9B SP. 411-9A
BOARD SENS 2 8A SV. 409-8A
A0-A4 14 TO 2/2
D0-D7 15 TO 2/2
BUF EN 16 TO 2/2
IRQ 16 TO 2/2
PIO CS
ALE
WE
RE

SY-124BOARD (1/2)
BOARD NO.1-624-858-11, 12
DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

SY-124 BOARD (2/2)

System Controller


FROM 1/2 12 WE:L
FROM 1/2 15 D0-D7
FROM 1/2 7 SVPO2 CS
AE, 404-4C CN414 4C TC READ
AE, 404-6C CN414 6C EXT TC
FROM 1/2 3 RESET
FROM 1/2 11 IF FRAME
CN413 (NC) 23C SY SPR IN1
(NC) 10C SV REF LOCK
FROM 1/2 16 IRO
CN413 (NC) 15A SY SPR IN2
(NC) 15C SY SPR IN3
FROM 1/2 6 SVP1 CS
FROM 1/2 13 RE:L
FROM 1/2 5 TCR CS
FROM 1/2 9 TCG FRAME
FROM 1/2 14 A0-A4
FROM 1/2 4 TCG CS
FROM 1/2 16 BUF EN
CN414 EN, 703-12B 7B DPJ 2 (NC)
EN, 703-12C 7C DPJ 1 (NC)
FROM 1/2 8 SVP01 CS
ICC15 SN74HC32N
ICA20 SN74HC574N
ICC13 TC74HC126N
ICC14 TC74HC125N
ICD17 SN74HC04N
ICD19 SN74HC32N
ICD21 SN74HC107N
ICB20 CX7912A
ICD16 SN74HC04N
ICD17 SN74HC04N
ICD19 SN74HC32N
ICD15 SN74HC00N
ICA18 SN74HC74N
ICB13 MC74HC4538AN
ICD18 SN74HC02N
ICA21 CD74HC40105E
ICD16 SN74HC04N
ICB17 CX7907A
ICD15 SN74HC00N
ICC16 MC14046BCP
ICB16 SN74HC244N
ICD22 SN74HC86N
ICC15 SN74HC32N
ICA14 SN74HC541N
ICD14 SN74HC00N
ICA18 SN74HC74N
ICD17 SN74HC04N
ICD15 SN74HC00N
ICC13 MC74HC126N
A20
B20
A21
B17
A18
B13
A14
B16
C16
X2 EXO-3C 14.318MHz
X1 EXO-3C 14.31818MHz
R6 220
NON DF
D2 LN25RP (RED)
D1 LN35GP (GREEN)
LTC READ
R15 10k
R16 10k
R5 220
R24 100
C64 1 50V
RB2 10KX8
SET UP S1
C26 0.01
R20 20k
PHASE COMPARATOR
VCO
R10 33k
C30 0.001
C31 4.7 25V
C32 1 50V
R9 100k
R8 470k
TP7 TCG FRAME
SLTC DMSS S4 S2 S1 OUDS PMD XPN HT4 SCK I SCKO CX IN CTL I XACS XDCS RST I SLCT FRE TSG1 TSG2 TSG3 TPN TEST TC IN PN
XDO3 XDO2 XDO1 XDO0 AD4 XWR BSRL DER FLD
AD4 AD3 AD2 AD1 AD0 XDI0 XDI1 XDI2 XDI3 SWCI SWSI SWMI SWVI CK IN PORI CS IN FWRE CTLI TSAI SLCK TST2 TST3 TOS1 TOS2 TOS3 TIS1 TIS1 DBCI TIS3 ACS DCS LCK I
XDO0 XDO1 XDO2 XDO3 LTC O LTC I SCKO LSDO LSCO LSBO SD IN LS HO BSGN XWR XOOB
TA0 TA1 TA2 TA3 TD0 TD1 TD2 TD3
+5V

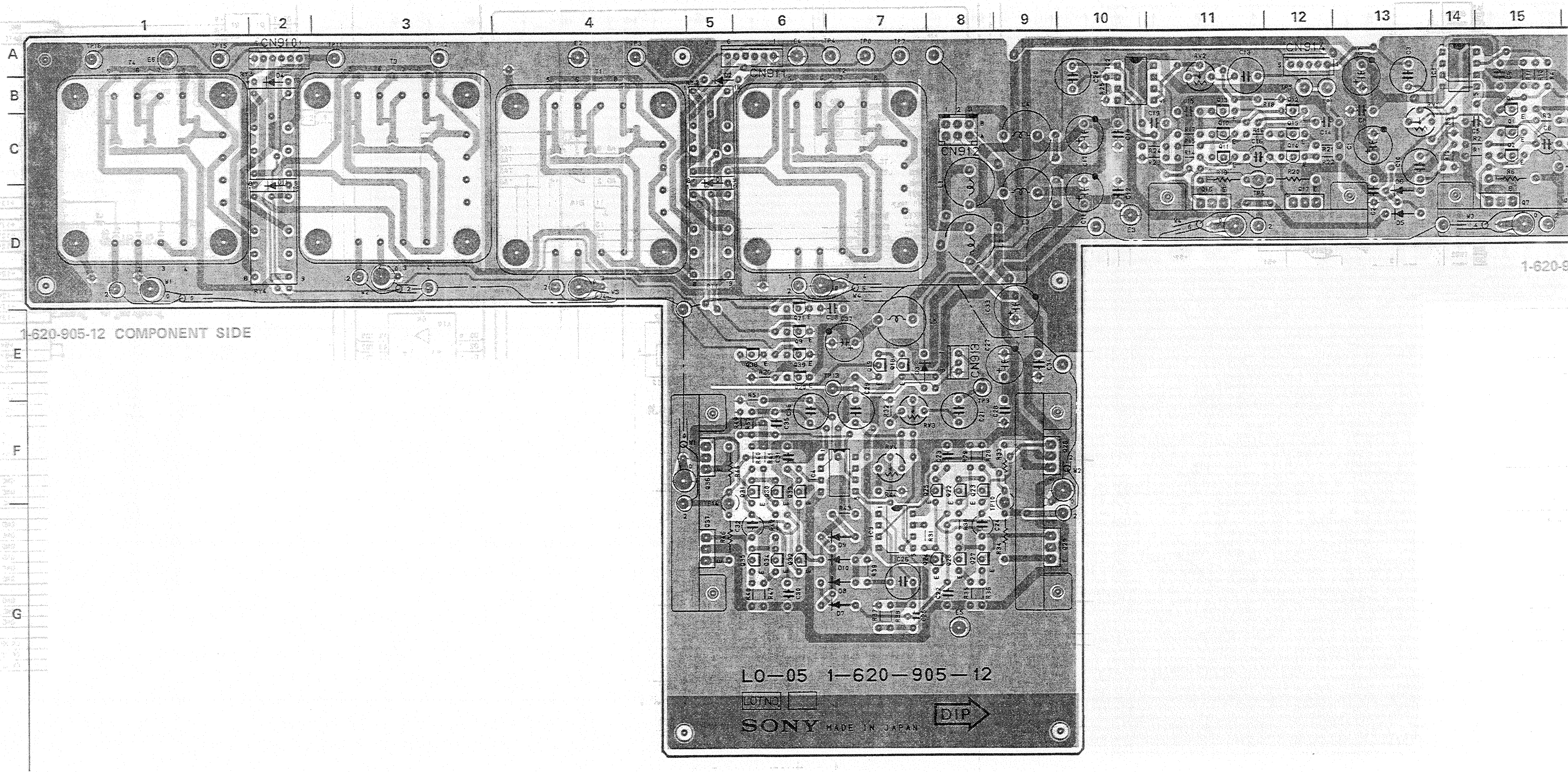

ICD21 SN74HC107N
ICB20 CX7912A
ICD16 SN74HC04N
ICD17 SN74HC04N
ICD19 SN74HC32N
ICD15 SN74HC00N
ICA18 SN74HC74N
ICB13 MC74HC4538AN
ICD18 SN74HC02N
ICA21 CD74HC40105E
ICD16 SN74HC04N
ICB17 CX7907A
ICD15 SN74HC00N
ICC16 MC14046BCP
ICB16 SN74HC244N
ICA19 SN74HC245N
ICC15 SN74HC32N
ICA15 SN74HC574N
CN414
TC GEN
5C
AE, 404-5C
LTC INT
TO 1/2
MRO
TO 1/2
SIO-B GATE CONT
TO 1/2
TP6 TEST2
TP5 TEST1
TP4 8P1B
TP3 RS422
TP2 SY⟷SP
TP1 V/6 JOB
B20
SLTC
DMSS
S4
S2
S1
OUDS
PMD
XPN
HT4
SCK I
SCKO
CX IN
CTL I
XACS
XDCS
RST I
SLCT
FRE
TSG1
TSG2
TSG3
TPN
TEST
TC IN
PN
XDD3
XDD2
XDD1
XDD0
AD4
XWR
BSRL
DER
FLD
A21
SI
MR
SO
OE
A18
B13
D21
LTC READ
D1 LN55BP (GREEN)
RB2 10K×8
A14
SET UP S1
TP7 TCG FRAME
B17
AD4
AD3
AD2
AD1
AD0
XD10
XD11
XD12
XD13
SWC1
SWS1
SWM1
SWY1
CK IN
PORI
CS IN
FWRE
CTLI
TSA1
SLCK
TST2
TST3
TOS1
TOS2
TOS3
TIS1
TIS1
DBC1
TIS3
ACS
DCS
LCK I
XDD0
XDD1
XDD2
XDD3
LTC O
LTC I
SCKO
LSDO
LSCO
LSBO
SD IN
LS HO
BSGN
XWR
XXDB
C16
PHASE COMPARATOR
VCO
R10 33k
C31 25V
C32 50V
R9 100k
R8 470k
C30 0.001
B16
A19
EN
DIR
A17
CS W/R
A15
EN
+12V
-12V
+5V
-5V
L1
L2
L3
0.022
C13 33 10V
C62 33 10V
C66 33 10V
C8 47 16V
C9, 12, 14, 15, 16, 17, 18, 19, 20
C21, 22, 23, 24, 25, 27, 28
C33, 35, 36, 37, 39
C41, 42, 49, 53, 54
C61, 63, 65, 67, 68, 69, 70
C71, 72, 73
E1
E2
E3
E4
E5
CN1
CN413
CN414
GND
CK ⊕
ICD22 SN74HC86N
ICC15 SN74HC32N
ICA14 SN74HC541N
ICD14 SN74HC00N
ICA18 SN74HC74N
ICD17 SN74HC04N
ICD15 SN74HC00N
ICC13 MC74HC126N
ICC14 MC74HC125N
ICB14 SN74HC32N
ICB1 SN74HC08N
ICA17 HM6148HP-55

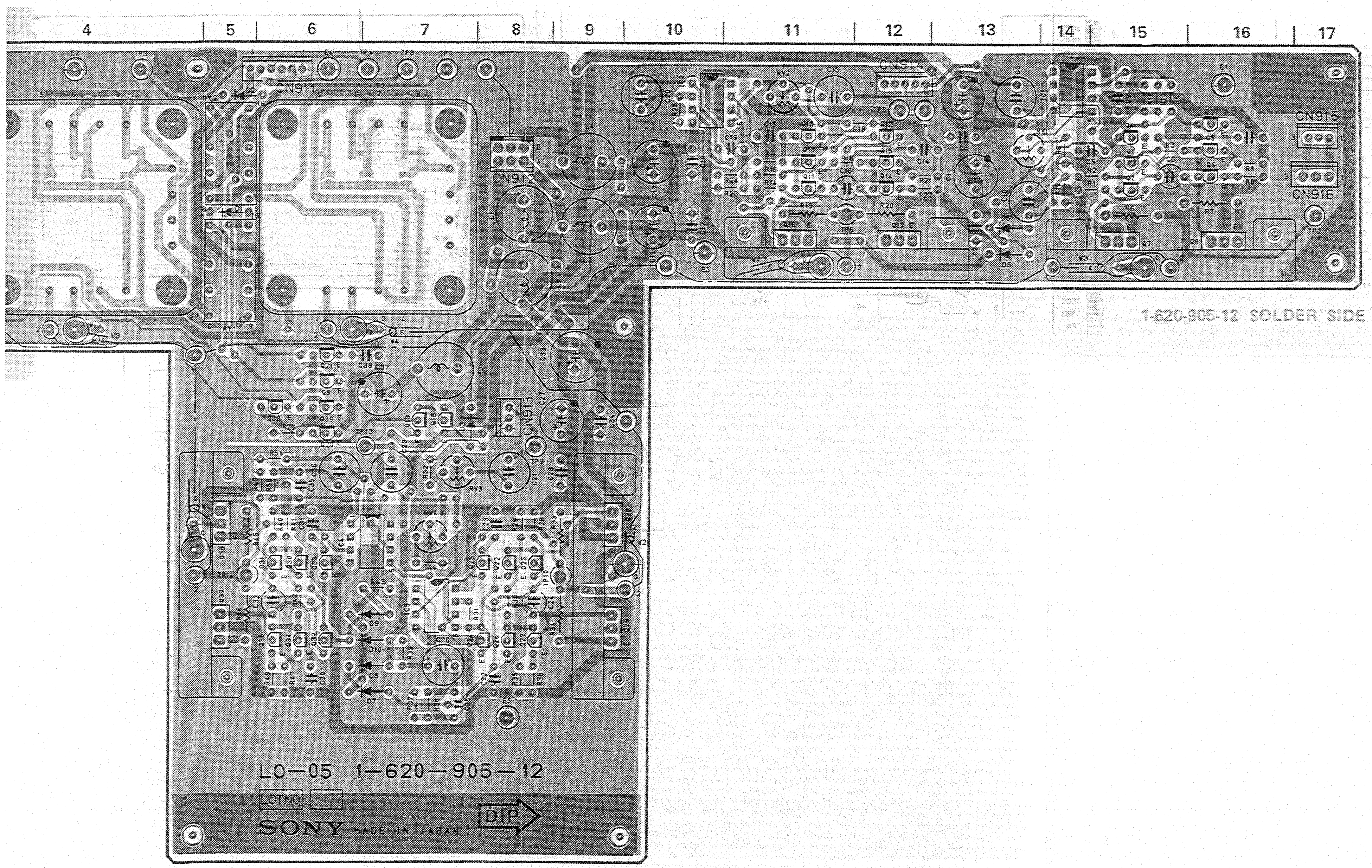
SY-124 BOARD (2/2)

BOARD NO.1-624-858-11, 12
DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

LO-05 BOARD (1-620-905-12)

Component Side


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
CN910
CN911
CN912
CN913
CN914
1-620-905-12 COMPONENT SIDE
LO—05 1—620—905—12
LOT NO.
SONY MADE IN JAPAN
DIP
1-620-9


4
5
6
7
8
9
10
11
12
13
14
15
16
17
CN911
CN912
CN913
CN914
CN915
CN916
1-620-905-12 SOLDER SIDE
LO-05 1-620-905-12
LOT NO.
SONY MADE IN JAPAN
DIP

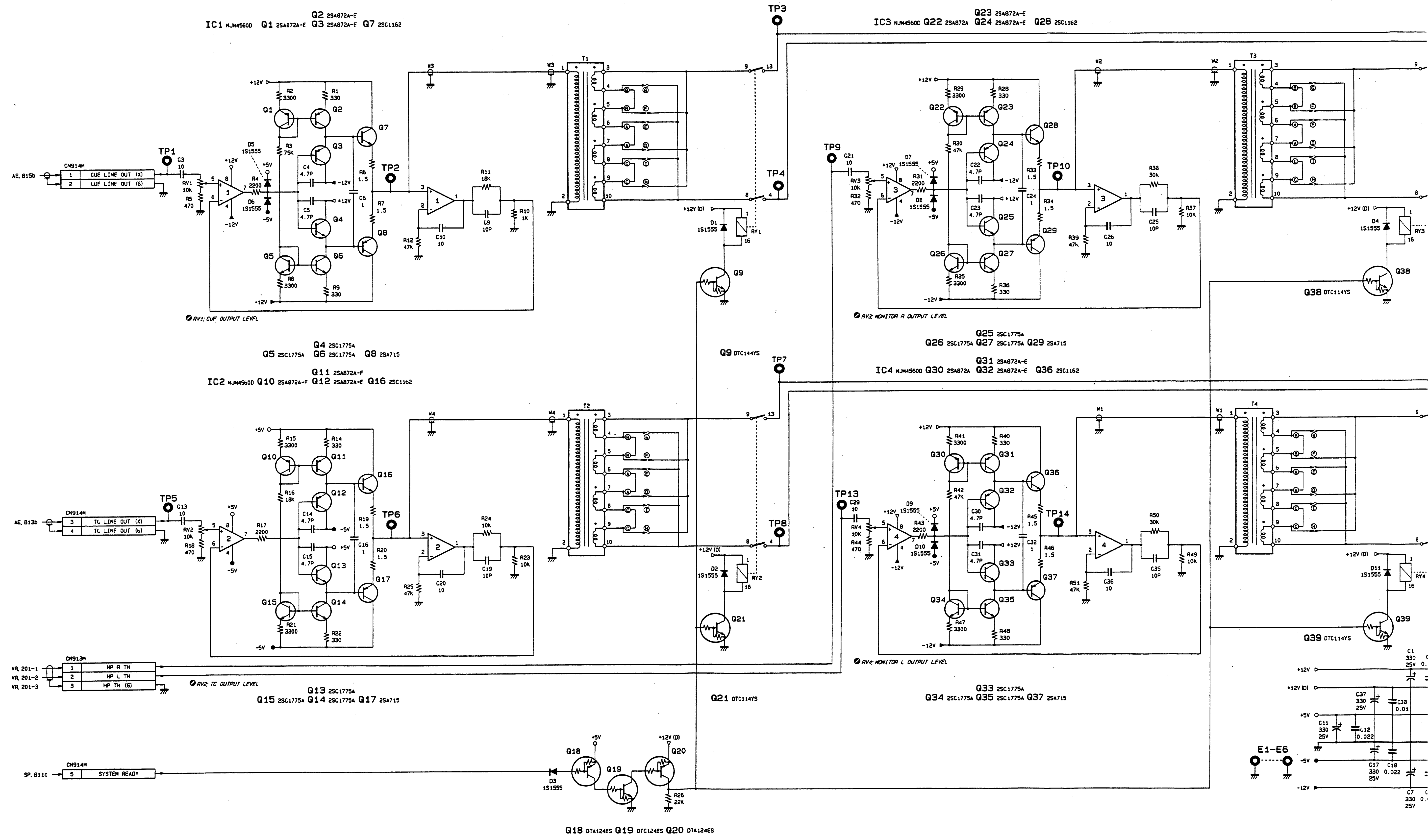
LO-05 (1-620-905-11,12)

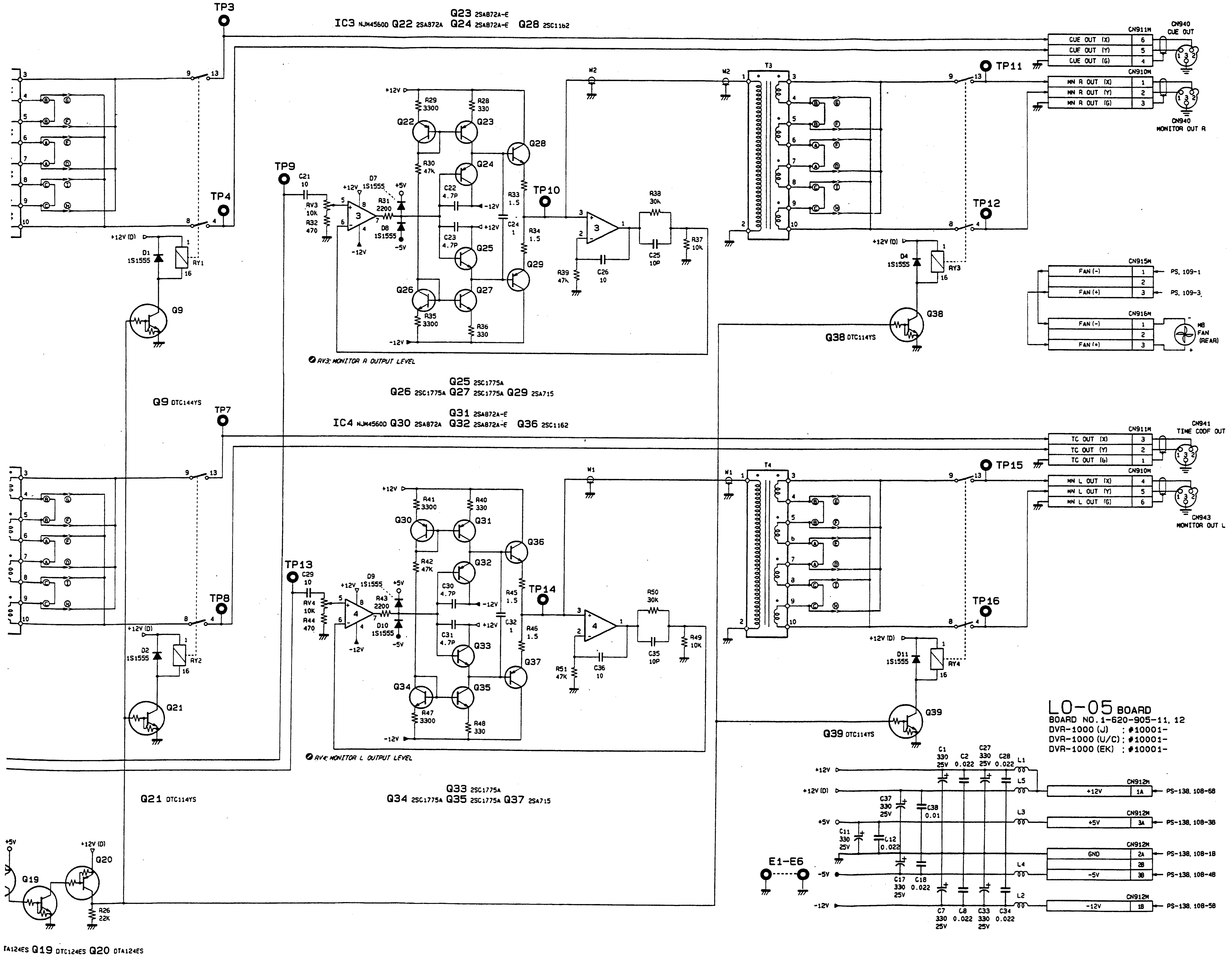
DVR-1000

CN910M	A2
CN911M	A6
CN912M	C8
CN913M	E8
CN914M	B12
CN915M	C17
CN916M	C17
D1	D5
D2	B3
D3	E7
D4	B2
D5	D13
D6	D13
D7	G7
D8	G7
D9	G7
D10	G7
D11	D2
E1	A16
E2	A4
E3	D10
E4	A6
E5	G8
E6	A1
IC1	B14
IC2	A10
IC3	G7
IC4	F7
Q1	C15
Q2	C15
Q3	B16
Q4	C15
Q5	C16
Q6	C16
Q7	D15
Q8	D16
Q9	E6
Q10	C11
Q11	C11
Q12	C12
Q13	C11
Q14	C12
Q15	C12
Q16	D11
Q17	D12
Q18	E7
Q19	E7
Q20	E6
Q21	E6
Q22	F8
Q23	F8
Q24	G8
Q25	F8
Q26	G8
Q27	G8
Q28	F9
Q29	G9
Q30	F6
Q31	F6
Q32	G6
Q33	F6
Q34	G6
Q35	G6
Q36	F5
Q37	G5
Q38	E6
Q39	E6
RV1	C13
RV2	B11
RV3	F7
RV4	F7
RY1	D5
RY2	C5
RY3	C2
RY4	D2
T1	D4
T2	D7
T3	D3
T4	D1
TP1	B12
TP2	C17
TP3	A4
TP4	A7
TP5	B12
TP6	C11
TP7	A7
TP8	A7
TP9	E8
TP10	G9
TP11	A3
TP12	A3
TP13	E7
TP14	G5
TP15	A1
TP16	A1

LO-05 BOARD

Audio Line Out


IC1 NJM4560D Q1 2SA872A-E Q2 2SA872A-E Q3 2SA872A-F Q7 2SC1162
Q4 2SC1775A Q5 2SC1775A Q6 2SC1775A Q8 2SA715
IC2 NJM4560D Q10 2SA872A-F Q11 2SA872A-F Q12 2SA872A-E Q16 2SC1162
Q13 2SC1775A Q15 2SC1775A Q14 2SC1775A Q17 2SA715
Q9 DTC144YS
Q21 DTC114YS
Q18 DTA124ES Q19 DTC124ES Q20 DTA124ES
IC3 NJM4560D Q22 2SA872A Q23 2SA872A-E Q24 2SA872A-E Q28 2SC1162
Q25 2SC1775A Q26 2SC1775A Q27 2SC1775A Q29 2SA715
IC4 NJM4560D Q30 2SA872A Q31 2SA872A-E Q32 2SA872A-E Q36 2SC1162
Q33 2SC1775A Q34 2SC1775A Q35 2SC1775A Q37 2SA715
Q38 DTC114YS
Q39 DTC114YS
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP13
TP14
E1-E6
CN914M
CUE LINE OUT (X)
CUE LINE OUT (G)
AE, B15b
TC LINE OUT (X)
TC LINE OUT (G)
AE, B13b
CN913M
HP R TH
HP L TH
HP TH (G)
VR, 201-1
VR, 201-2
VR, 201-3
SYSTEM READY
SP, B11c
RV1: CUE OUTPUT LEVEL
RV2: TC OUTPUT LEVEL
RV3: MONITOR R OUTPUT LEVEL
RV4: MONITOR L OUTPUT LEVEL
T1
T2
T3
T4
RY1
RY2
RY3
RY4
+12V
-12V
+5V
-5V
+12V (D)

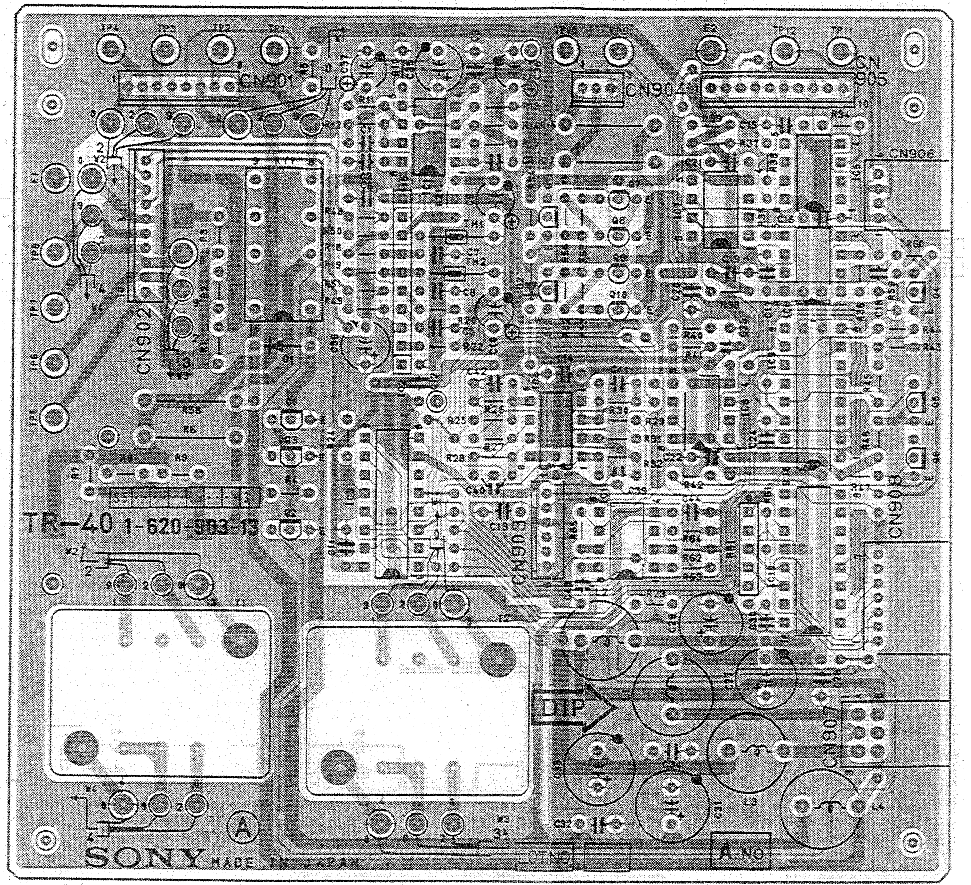

TP3
IC3 NJM4560D Q22 2SA872A Q23 2SA872A-E Q24 2SA872A-E Q28 2SC1162
CN911M
CN940 CUE OUT
CUE OUT (X)
CUE OUT (Y)
CUE OUT (G)
TP11
CN910M
MN R OUT (X)
MN R OUT (Y)
MN R OUT (G)
CN940 MONITOR OUT R
T3
TP9
TP10
TP4
TP12
RY1
RY3
Q9
Q38
Q38 DTC114YS
CN915M
FAN (-)
FAN (+)
PS, 109-1
PS, 109-3
CN916M
M8 FAN (REAR)
RV3: MONITOR R OUTPUT LEVEL
Q25 2SC1775A
Q26 2SC1775A Q27 2SC1775A Q29 2SA715
Q9 DTC144YS
TP7
IC4 NJM4560D Q30 2SA872A Q31 2SA872A-E Q32 2SA872A-E Q36 2SC1162
CN941 TIME CODE OUT
TC OUT (X)
TC OUT (Y)
TC OUT (G)
TP15
MN L OUT (X)
MN L OUT (Y)
MN L OUT (G)
CN943 MONITOR OUT L
T4
TP13
TP14
TP8
TP16
RY2
RY4
Q21
Q39
Q39 DTC114YS
RV4: MONITOR L OUTPUT LEVEL
Q33 2SC1775A
Q34 2SC1775A Q35 2SC1775A Q37 2SA715
Q21 DTC114YS
E1-E6
CN912M
+12V 1A PS-138, 108-6B
+5V 3A PS-138, 108-3B
GND 2A 2B PS-138, 108-1B
-5V 3B PS-138, 108-4B
-12V 1B PS-138, 108-5B
Q19
Q20
TA124ES Q19 DTC124ES Q20 DTA124ES

LO-05 BOARD
BOARD NO. 1-620-905-11, 12
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

Ref. No.	Pin No.			
	+12V	+5V	−5V	−12V
IC 1	8			4
IC 2		8	4	
IC 3	8			4
IC 4	8			4

TR-40 BOARD (1-620-903-13)

Component Side

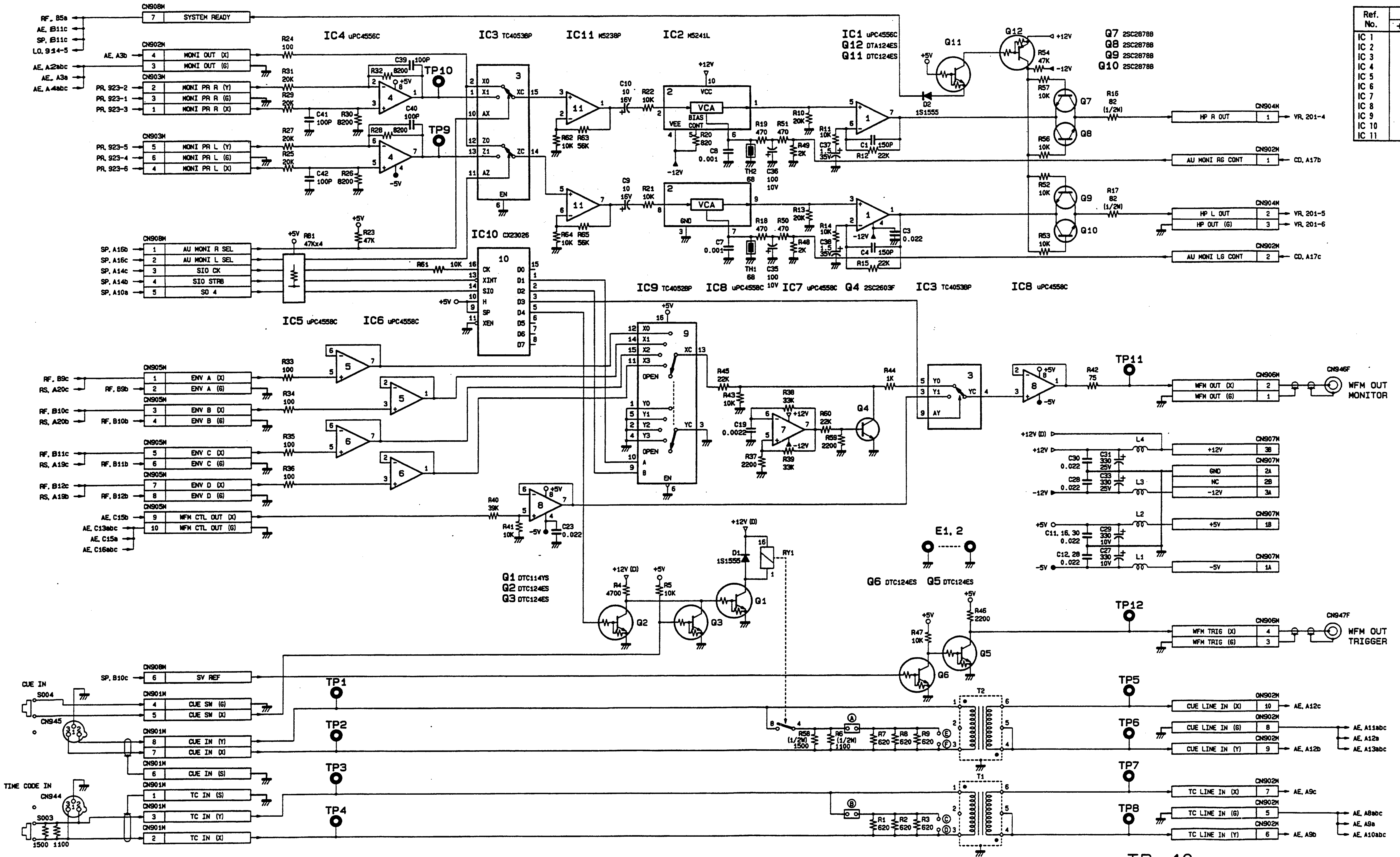

TR-40 1-620-903-13
CN901
CN902
CN904
CN905
CN906
CN907
CN908
CN909
DIP
A
SONY MADE IN JAPAN

1-620-903-13 COMPONENT SIDE

1-620-903-13 SOLDER SIDE

TR-40 BOARD

Input Transfomer

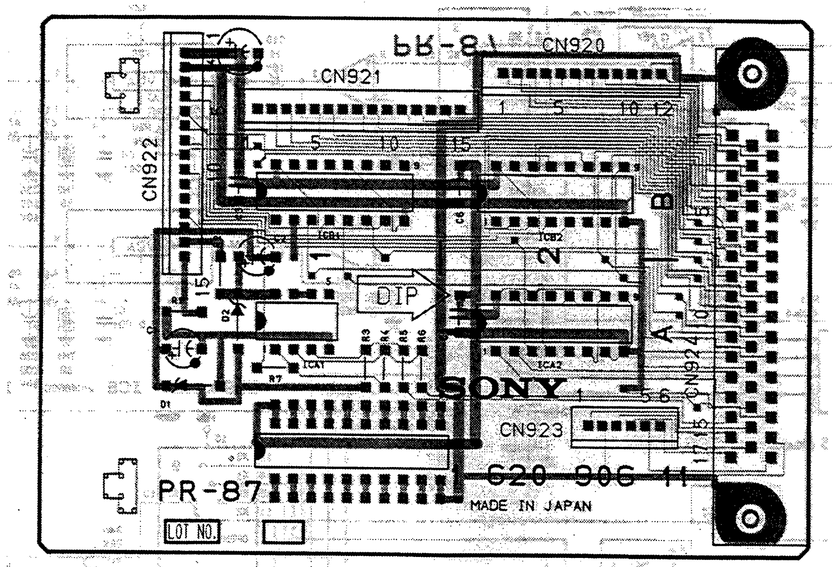

CN908M
SYSTEM READY
CN902M
MONI OUT (X)
MONI OUT (G)
CN903M
MONI PR R (Y)
MONI PR R (G)
MONI PR R (X)
MONI PR L (Y)
MONI PR L (G)
MONI PR L (X)
IC4 uPC4556C
IC3 TC4053BP
IC11 M5238P
IC2 M5241L
IC1 uPC4556C
Q12 DTA124ES
Q11 DTC124ES
Q7 2SC2878B
Q8 2SC2878B
Q9 2SC2878B
Q10 2SC2878B
TP10
TP9
VCA
BIAS CONT
1S1555
HP R OUT
AU MONI RG CONT
HP L OUT
HP OUT (G)
AU MONI LG CONT
VR, 201-4
CD, A17b
VR, 201-5
VR, 201-6
CD, A17c
AU MONI R SEL
AU MONI L SEL
SIO CK
SIO STRB
SO 4
IC10 CX23026
IC5 uPC4558C
IC6 uPC4558C
IC9 TC4052BP
IC8 uPC4558C
IC7 uPC4558C
Q4 2SC2603F
IC3 TC4053BP
IC8 uPC4558C
CN905M
ENV A (X)
ENV A (G)
ENV B (X)
ENV B (G)
ENV C (X)
ENV C (G)
ENV D (X)
ENV D (G)
WFM CTL OUT (X)
WFM CTL OUT (G)
TP11
WFM OUT (X)
WFM OUT (G)
CN906M
CN946F
WFM OUT MONITOR
CN907M
+12V
GND
NC
-12V
+5V
-5V
L1
L2
L3
L4
E1, 2
RY1
Q1 DTC114YS
Q2 DTC124ES
Q3 DTC124ES
Q6 DTC124ES
Q5 DTC124ES
TP12
WFM TRIG (X)
WFM TRIG (G)
CN947F
WFM OUT TRIGGER
CUE IN
S004
CN945
SV REF
CUE SW (G)
CUE SW (X)
CUE IN (Y)
CUE IN (X)
CUE IN (S)
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
T1
T2
CUE LINE IN (X)
CUE LINE IN (G)
CUE LINE IN (Y)
AE, A12c
AE, A11abc
AE, A12a
AE, A12b
AE, A13abc
TIME CODE IN
CN944
S003
TC IN (S)
TC IN (Y)
TC IN (X)
TC LINE IN (X)
TC LINE IN (G)
TC LINE IN (Y)
AE, A9c
AE, A8abc
AE, A9a
AE, A9b
AE, A10abc

Ref. No.	Pin No.				
	+12V	+5V	GND	−5V	−12V
IC 1	8				4
IC 2	10		3		4
IC 3		16	8	7	
IC 4		8		4	
IC 5		8		4	
IC 6		8		4	
IC 7		8		4	
IC 8		8		4	
IC 9		16	8	7	
IC 10		12	4		
IC 11	8				4

TR-40 BOARD
BOARD NO. 1-620-903-11, 12, 13
DVR-1000 (J) : #10001-
DVR-1000 (U/C): #10001-
DVR-1000 (EK) : #10001-

PR-87 BOARD (1-620-906-11)

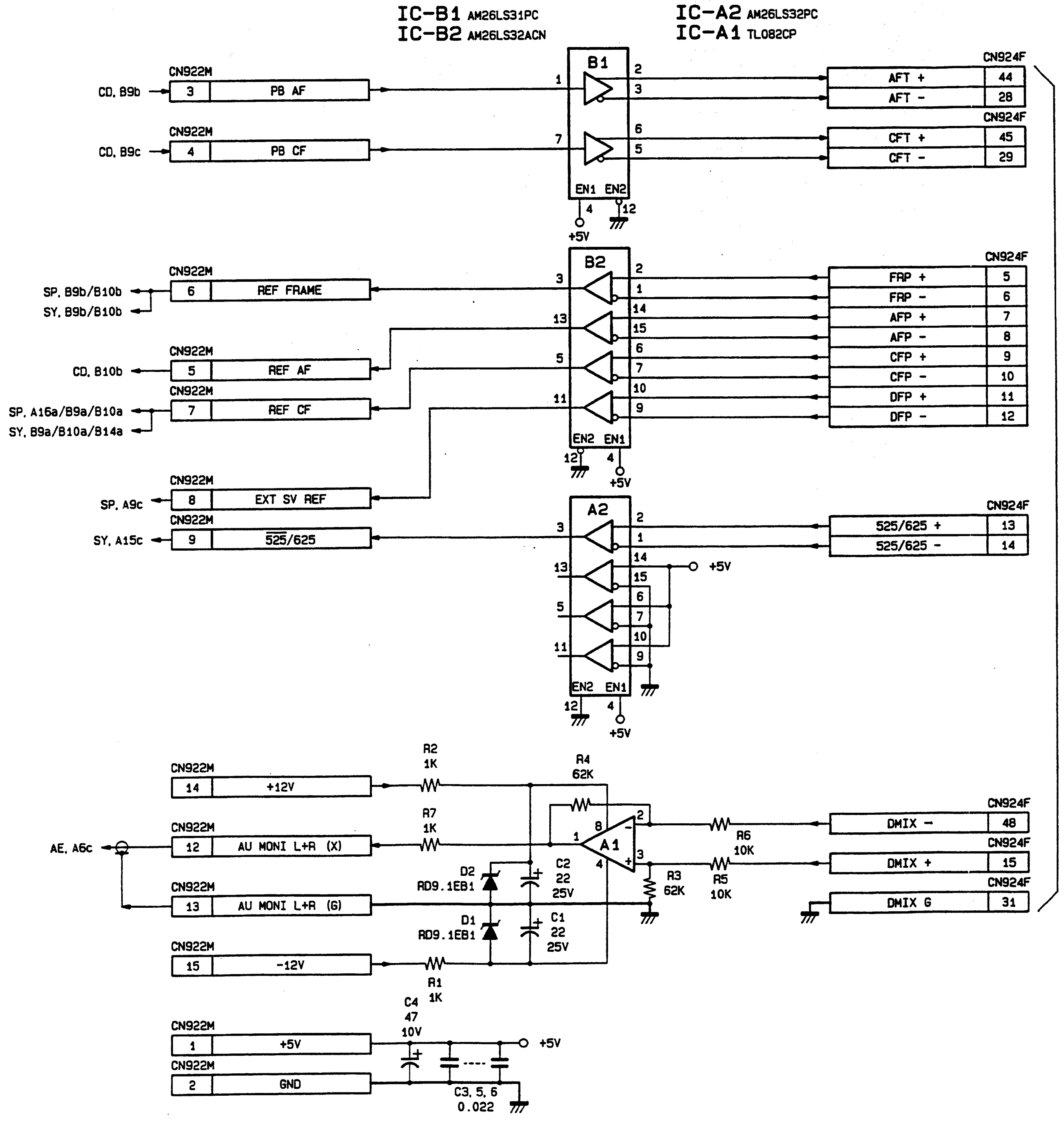
Component Side

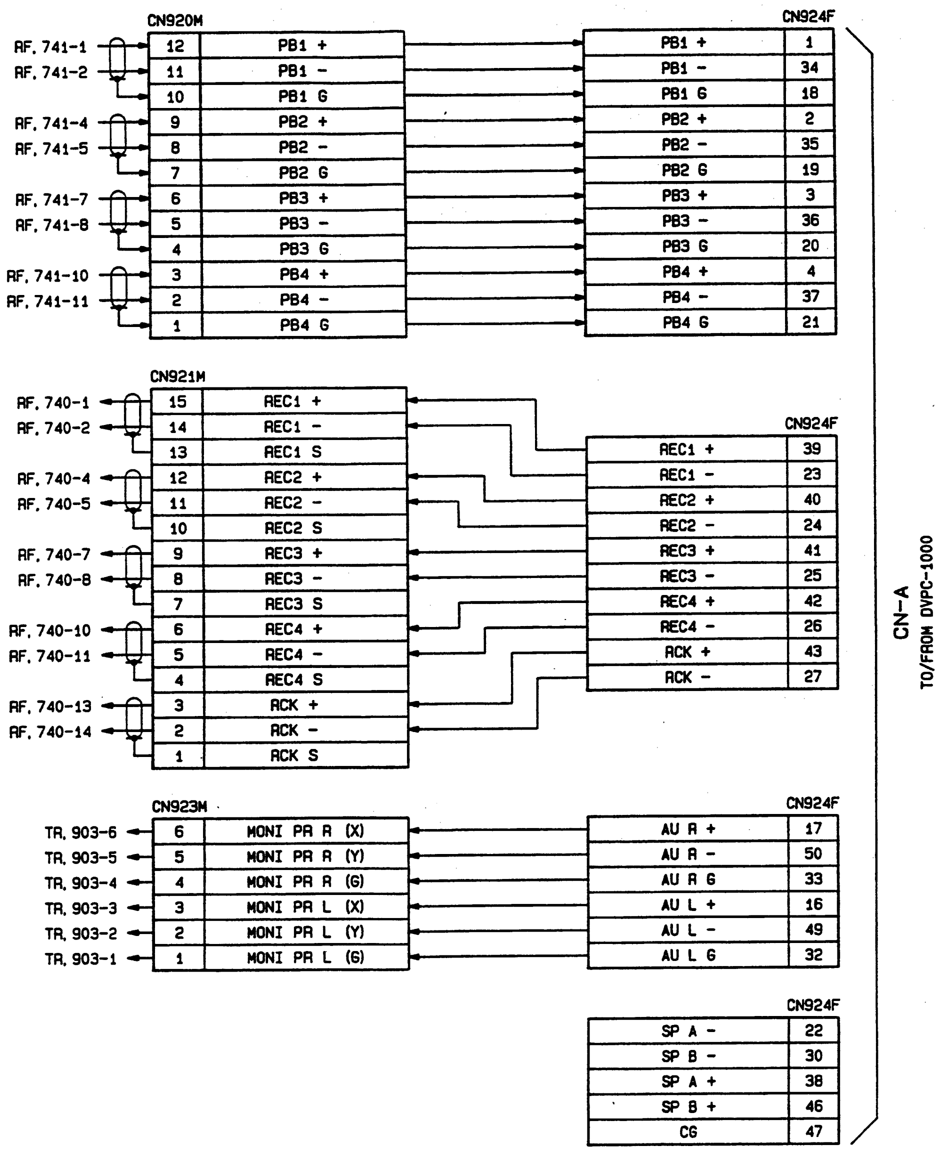

PR-87
CN920
CN921
CN922
CN923
CN924
1
5
10
12
15
DIP
ICA1
ICA2
ICB1
ICB2
D1
D2
R7
A
B
SONY
620 906 11
MADE IN JAPAN
LOT NO.

1-620-906-11 COMPONENT SIDE
1-620-906-11 SOLDER SIDE

Ref. No.	Pin No.	
	+5V	GND
IC A1	Refer to schematic diagram.	
IC A2	16	8
IC B1	16	8
IC B2	16	8

PR-87 BOARD
Processor Interface (CN-A)

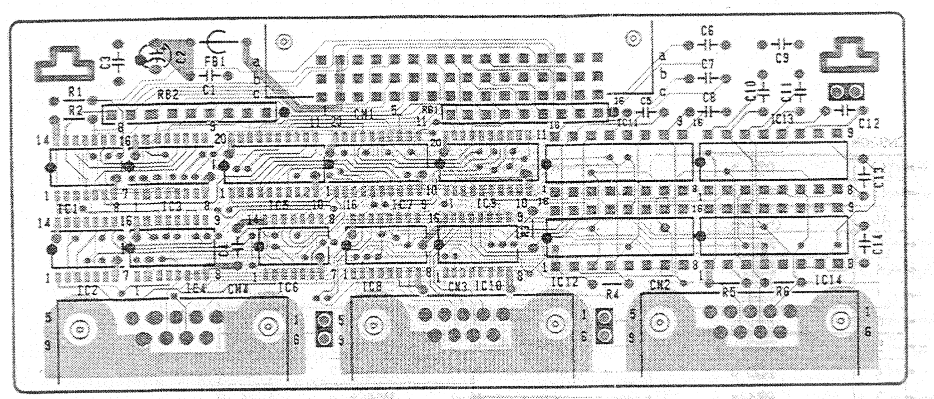

IC-B1 AM26LS31PC
IC-B2 AM26LS32ACN
IC-A2 AM26LS32PC
IC-A1 TL082CP
CD, B9b
CN922M 3 PB AF
CD, B9c
CN922M 4 PB CF
B1
CN924F
AFT + 44
AFT − 28
CFT + 45
CFT − 29
EN1 EN2
+5V
B2
SP, B9b/B10b
SY, B9b/B10b
CN922M 6 REF FRAME
CD, B10b
CN922M 5 REF AF
SP, A16a/B9a/B10a
SY, B9a/B10a/B14a
CN922M 7 REF CF
FRP + 5
FRP − 6
AFP + 7
AFP − 8
CFP + 9
CFP − 10
DFP + 11
DFP − 12
SP, A9c
CN922M 8 EXT SV REF
SY, A15c
CN922M 9 525/625
A2
525/625 + 13
525/625 − 14
+5V
CN922M 14 +12V
R2 1K
R4 62K
CN922M 12 AU MONI L+R (X)
AE, A6c
R7 1K
A1
R6 10K
R3 62K
R5 10K
DMIX − 48
DMIX + 15
DMIX G 31
D2 RD9.1EB1
C2 22 25V
D1 RD9.1EB1
C1 22 25V
CN922M 13 AU MONI L+R (G)
CN922M 15 −12V
R1 1K
C4 47 10V
CN922M 1 +5V
CN922M 2 GND
C3, 5, 6 0.022
CN-A
TO/FROM DVPC-1000


CN920M
RF, 741-1
RF, 741-2
RF, 741-4
RF, 741-5
RF, 741-7
RF, 741-8
RF, 741-10
RF, 741-11
12 PB1 +
11 PB1 −
10 PB1 G
9 PB2 +
8 PB2 −
7 PB2 G
6 PB3 +
5 PB3 −
4 PB3 G
3 PB4 +
2 PB4 −
1 PB4 G
CN924F
PB1 + 1
PB1 − 34
PB1 G 18
PB2 + 2
PB2 − 35
PB2 G 19
PB3 + 3
PB3 − 36
PB3 G 20
PB4 + 4
PB4 − 37
PB4 G 21
CN921M
RF, 740-1
RF, 740-2
RF, 740-4
RF, 740-5
RF, 740-7
RF, 740-8
RF, 740-10
RF, 740-11
RF, 740-13
RF, 740-14
15 REC1 +
14 REC1 −
13 REC1 S
12 REC2 +
11 REC2 −
10 REC2 S
9 REC3 +
8 REC3 −
7 REC3 S
6 REC4 +
5 REC4 −
4 REC4 S
3 RCK +
2 RCK −
1 RCK S
REC1 + 39
REC1 − 23
REC2 + 40
REC2 − 24
REC3 + 41
REC3 − 25
REC4 + 42
REC4 − 26
RCK + 43
RCK − 27
CN923M
TR, 903-6
TR, 903-5
TR, 903-4
TR, 903-3
TR, 903-2
TR, 903-1
6 MONI PR R (X)
5 MONI PR R (Y)
4 MONI PR R (G)
3 MONI PR L (X)
2 MONI PR L (Y)
1 MONI PR L (G)
AU R + 17
AU R − 50
AU R G 33
AU L + 16
AU L − 49
AU L G 32
SP A − 22
SP B − 30
SP A + 38
SP B + 46
CG 47
CN-A
TO/FROM DVPC-1000

PR-87 BOARD
BOARD NO.1-620-906-11
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

IF-134 BOARD (1-620-888-12, 13)

Component Side

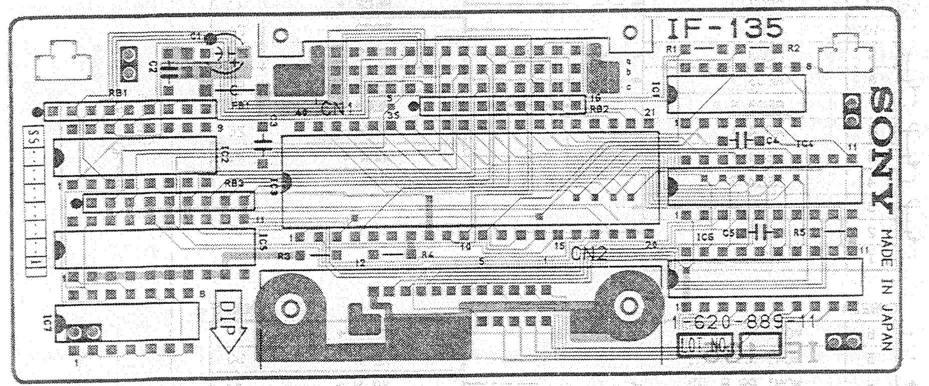

CN1
CN2
CN3
CN4
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
RB1
RB2
R1
R2
R3
R4
R5
R6
FB1
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13

1-620-888-12,13 COMPONENT SIDE

1-620-888-12,13 SOLDER SIDE

IF-135 BOARD (1-620-889-11)

Component Side

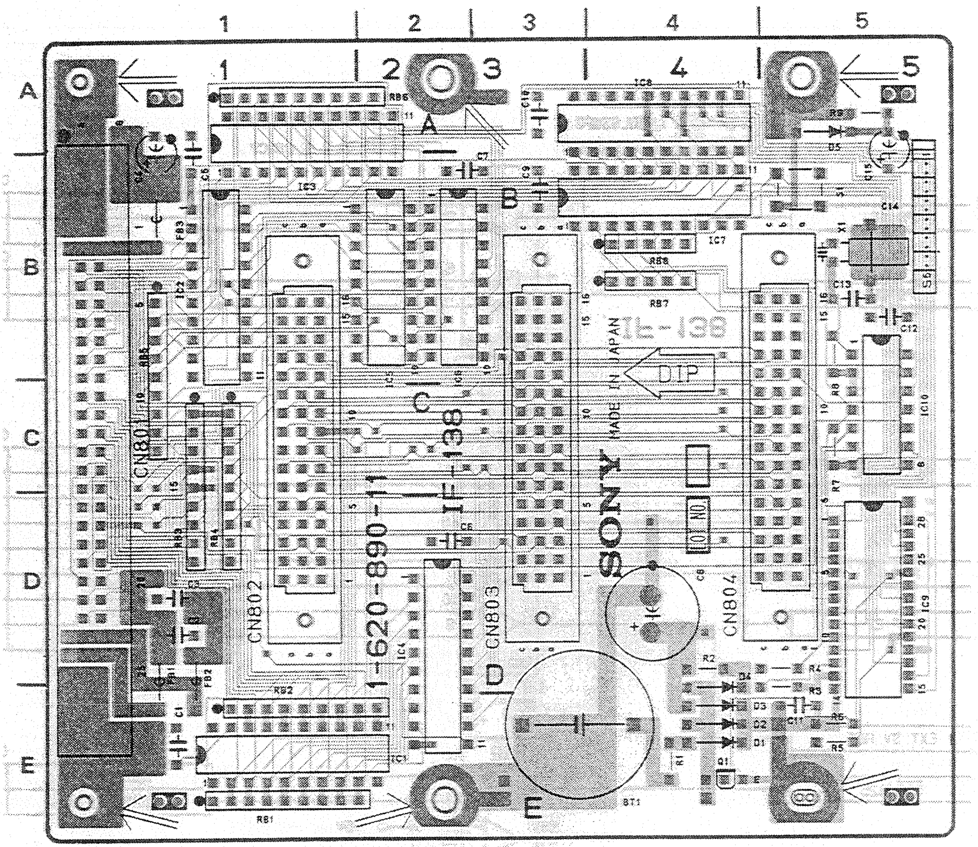

IF-135
SONY
MADE IN JAPAN
1-620-889-11
LOT NO.
DIP
CN1
CN2
IC1
IC2
IC3
IC4
IC5
IC6
IC7
RB1
RB2
RB3
R1
R2
R3
R4
R5
FB1
C1
C2
C3
C4
C5
S1

1-620-889-11 COMPONENT SIDE

1-620-889-11 SOLDER SIDE

IF-138 BOARD (1-620-890-11)

Component Side


1
2
3
4
5
A
B
C
D
E
IF-138
1-620-890-11
SONY
MADE IN JAPAN
LOT NO.
DIP
CN801
CN802
CN803
CN804
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
RB1
RB2
RB3
RB4
RB5
RB6
RB7
RB8
FB1
FB2
FB3
BT1
Q1
X1
S1
D1
D2
D3
D4
D5
R1
R2
R3
R4
R5
R6
R7
R8
R9
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15

1-620-890-11 COMPONENT SIDE

1-620-890-11 SOLDER SIDE

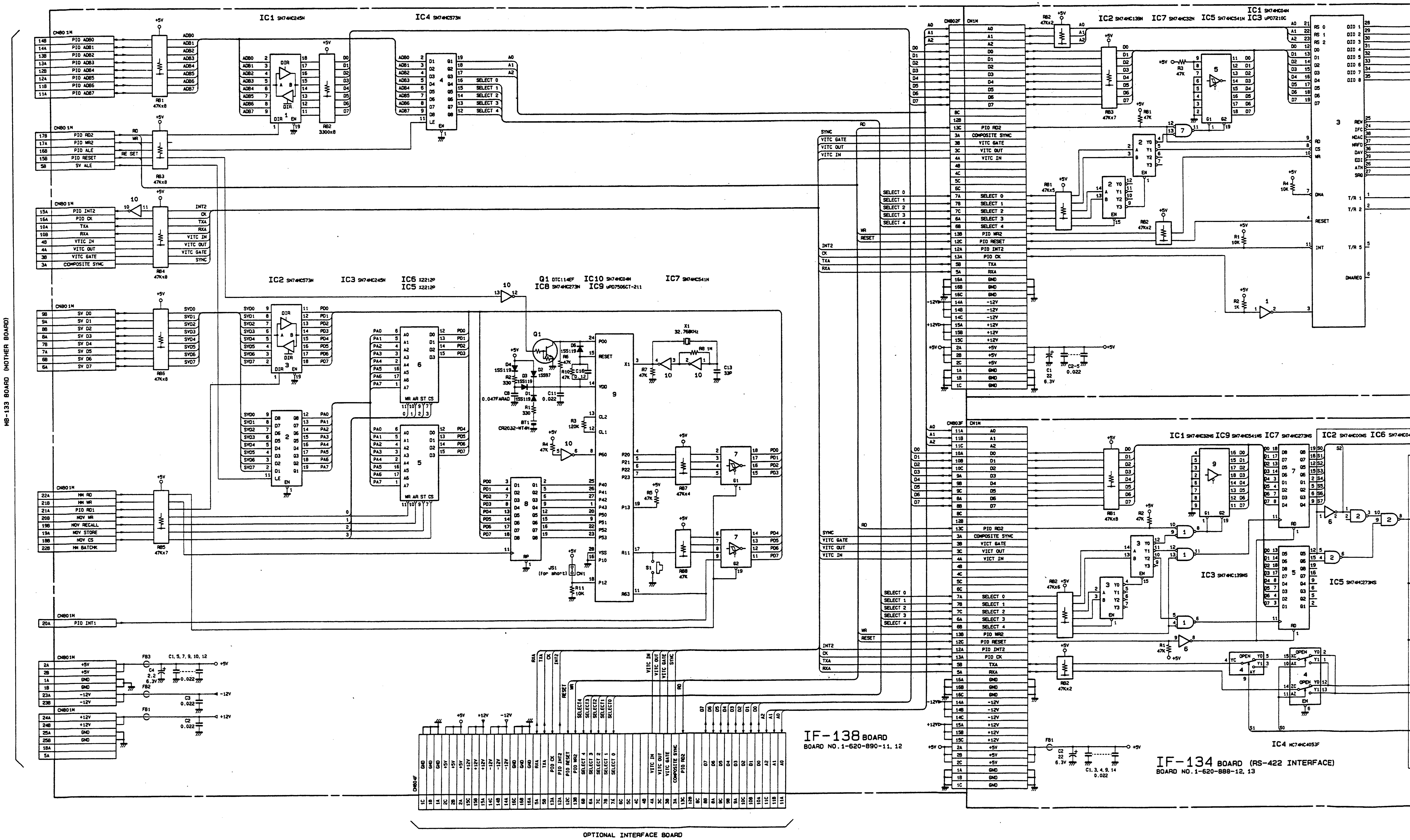
IF-138 (1-620-890-11)

DVR-1000

BT1	E3	Q1	E4
CN801M	B1	RB1	E1
CN802M	D1	RB2	E1
CN803M	D3	RB3	C1
CN804M	D5	RB4	C1
		RB5	B1
D1	E4	RB6	A1
D2	E4	RB7	B4
D3	E4	RB8	B4
D4	E4		
D5	A5	S1	B5
FB1	D1	X1	B5
FB2	D1		
FB3	B1		
IC1	E1		
IC2	B1		
IC3	A1		
IC4	D2		
IC5	B2		
IC6	B2		
IC7	B4		
IC8	A4		
IC9	D5		
IC10	C5		

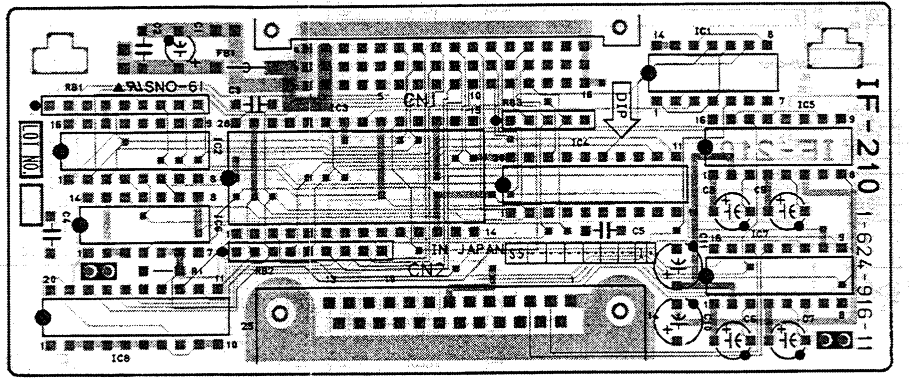
INTERFACE

IF-134 BOARD : RS-422 Interface Board
IF-135 BOARD : GP-IB Interface Board
IF-138 BOARD : Interface Mother Board


MB-133 BOARD (MOTHER BOARD)
CN801M
IC1 SN74HC245N
IC4 SN74HC573N
IC2 SN74HC573N
IC3 SN74HC245N
IC6 X2212P
IC5 X2212P
Q1 DTC114EF
IC8 SN74HC273N
IC10 SN74HC04N
IC9 uPD7506CT-211
IC7 SN74HC541N
X1 32.768KHz
BT1 CR2032-WT4H
JS1 (for short)
CN804F
OPTIONAL INTERFACE BOARD
IF-138 BOARD
BOARD NO. 1-620-890-11, 12
CN802F
CN803F
CN1M
IC1 SN74HC04N
IC2 SN74HC138N
IC7 SN74HC32N
IC5 SN74HC541N
IC3 uPD7210C
IC1 SN74HC32NS
IC9 SN74HC541NS
IC7 SN74HC273NS
IC2 SN74HC00NS
IC6 SN74HC04
IC3 SN74HC139NS
IC5 SN74HC273NS
IC4 MC74HC4053F
IF-134 BOARD (RS-422 INTERFACE)
BOARD NO. 1-620-888-12, 13

IF-210 BOARD (1-624-916-11)

Component Side


IF-210
1-624-916-11
CN1
CN2
DIP
IN JAPAN
IC1
IC2
IC3
IC4
IC5
IC6
IC7
RB1
RB2
SNO-61
C5

1-624-916-11 COMPONENT SIDE

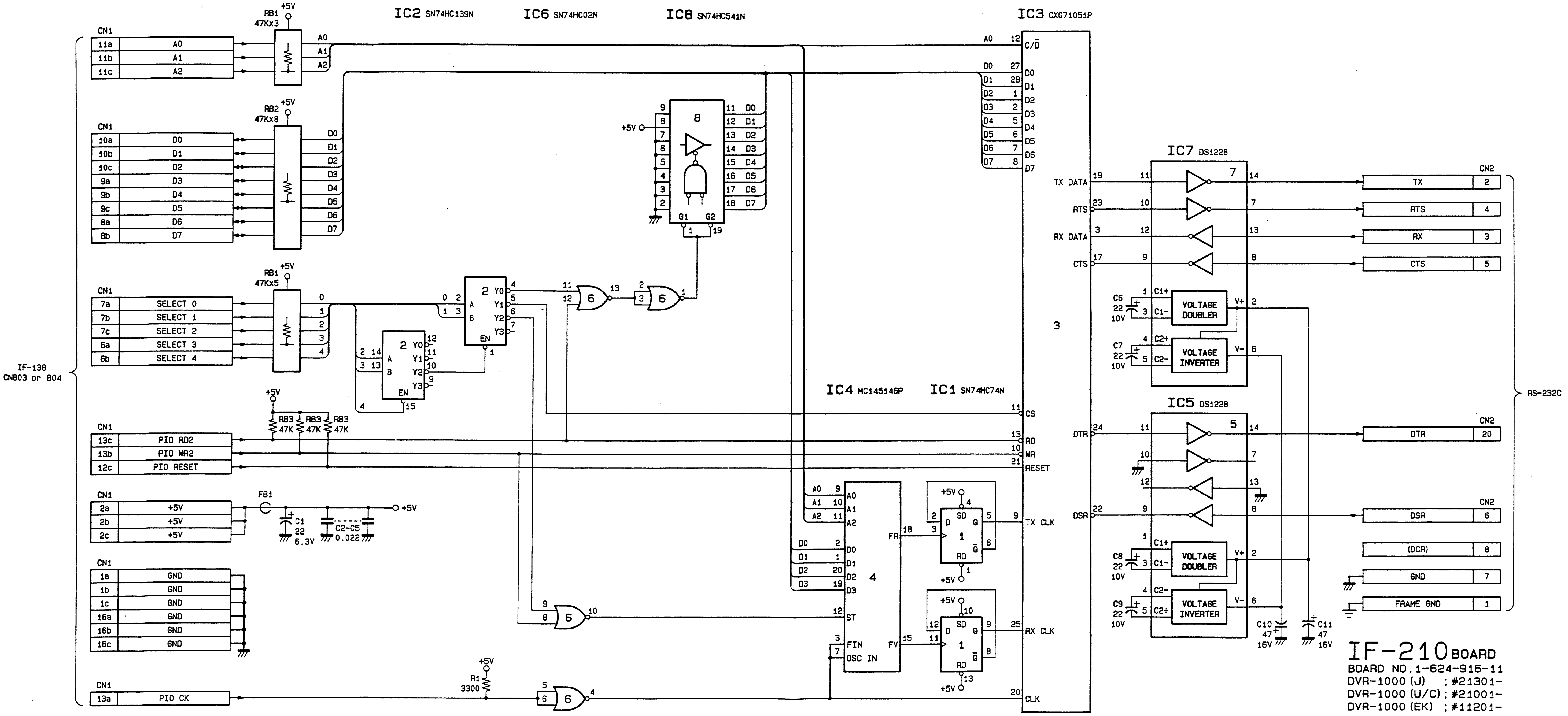
1-624-916-11 SOLDER SIDE

IF-210 BOARD

Ref. No.	Pin No.	
	+5V	GND
IC 1	16	8
IC 2	20	10
IC 3	14	7
IC 4	14	7
IC 5	26, 58	10, 25 57
IC 6	26, 58	10, 25 57
IC 7	14	7
IC 8	14	7

IF-210 BOARD

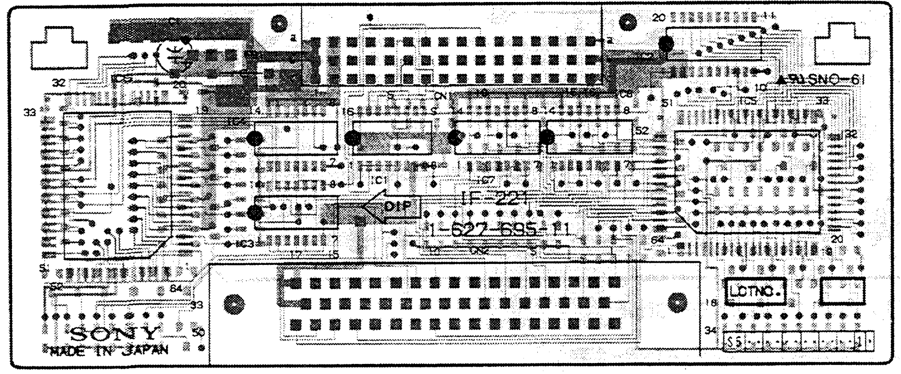
RS-232C Interface Board


CN1
11a A0
11b A1
11c A2
RB1 47Kx3 +5V
10a D0
10b D1
10c D2
9a D3
9b D4
9c D5
8a D6
8b D7
RB2 47Kx8 +5V
7a SELECT 0
7b SELECT 1
7c SELECT 2
6a SELECT 3
6b SELECT 4
RB1 47Kx5 +5V
IF-138 CN803 or 804
13c PIO RD2
13b PIO WR2
12c PIO RESET
RB3 47K
2a +5V
2b +5V
2c +5V
FB1
C1 22 6.3V
C2-C5 0.022
1a GND
1b GND
1c GND
16a GND
16b GND
16c GND
13a PIO CK
R1 3300
IC2 SN74HC139N
IC6 SN74HC02N
IC8 SN74HC541N
IC3 CXG71051P
IC4 MC145146P
IC1 SN74HC74N
IC7 DS1228
IC5 DS1228
C/D
CS
RD
WR
RESET
TX CLK
RX CLK
CLK
TX DATA
RTS
RX DATA
CTS
DTR
DSR
FR
FV
FIN
OSC IN
ST
SD
RD
VOLTAGE DOUBLER
VOLTAGE INVERTER
C6 22 10V
C7 22 10V
C8 22 10V
C9 22 10V
C10 47 16V
C11 47 16V
CN2
TX 2
RTS 4
RX 3
CTS 5
DTR 20
DSR 6
(DCR) 8
GND 7
FRAME GND 1
RS-232C

IF-210 BOARD
BOARD NO.1-624-916-11
DVR-1000 (J) ; #21301-
DVR-1000 (U/C) ; #21001-
DVR-1000 (EK) ; #11201-

IF-221 BOARD (1-627-695-11)

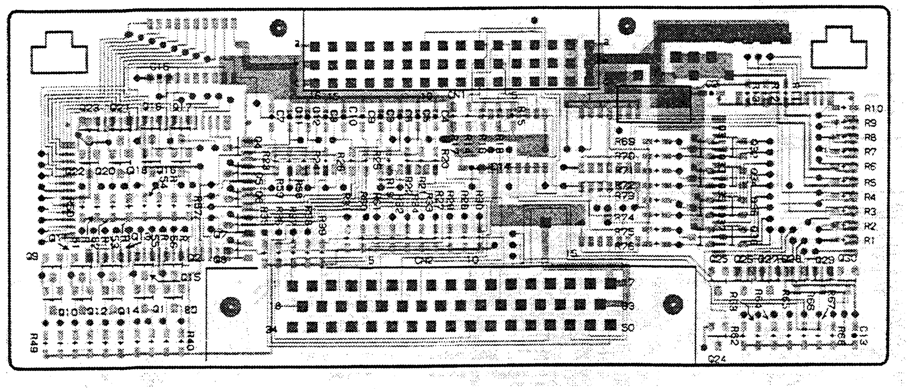
Component Side


IF-221
1-627-695-11
DIP
SNO-61
LOTNO.
SONY
MADE IN JAPAN
CN1
CN2
IC1
IC3
IC5
IC7

1-627-695-11 COMPONENT SIDE
1-627-695-11 SOLDER SIDE

IF-221 BOARD (1-627-695-11)

Solder Side


CN1
CN2
R10
R9
R8
R7
R6
R5
R4
R3
R2
R1

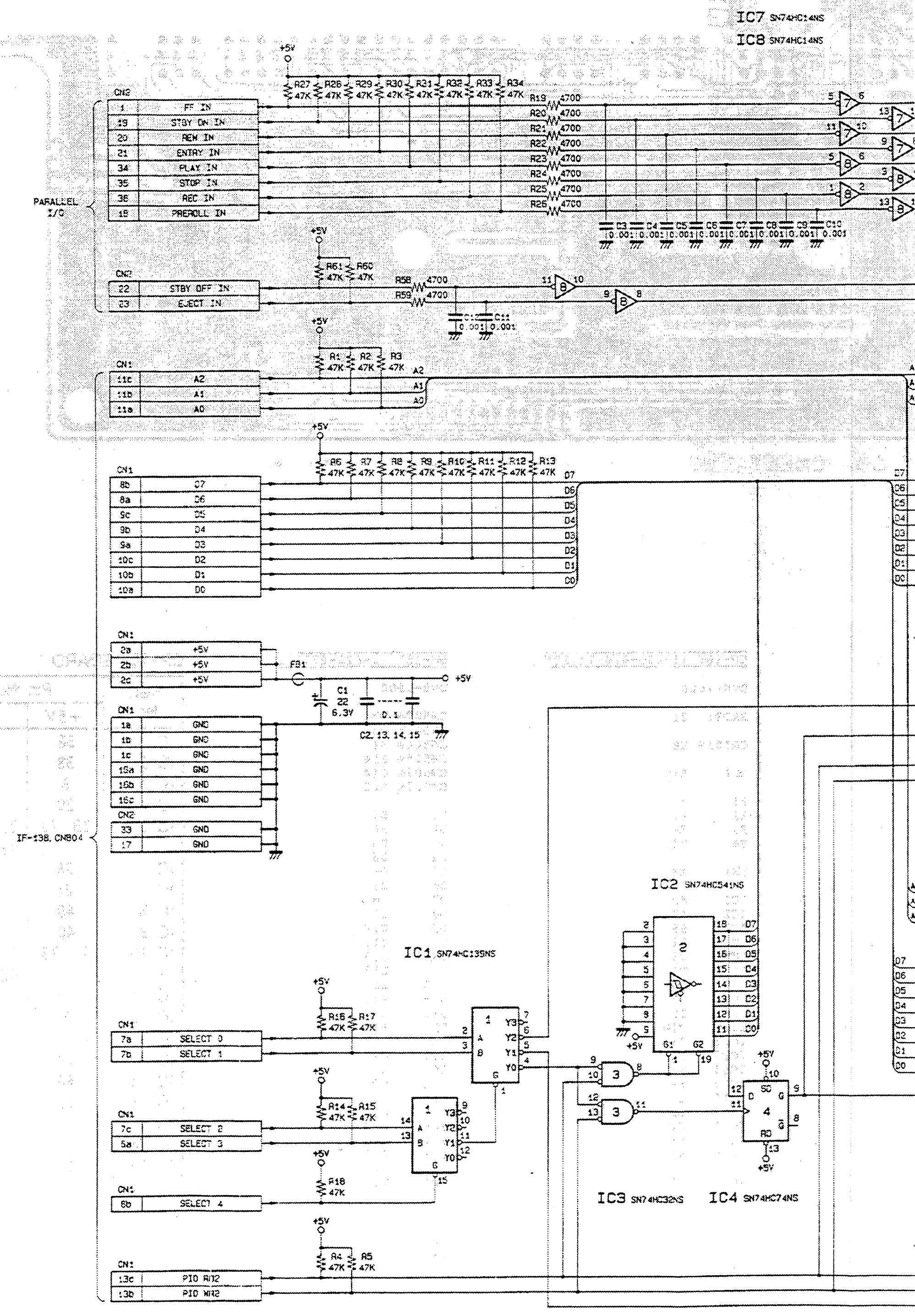
1-627-695-11 COMPONENT SIDE
1-627-695-11 SOLDER SIDE

IF-221 BOARD

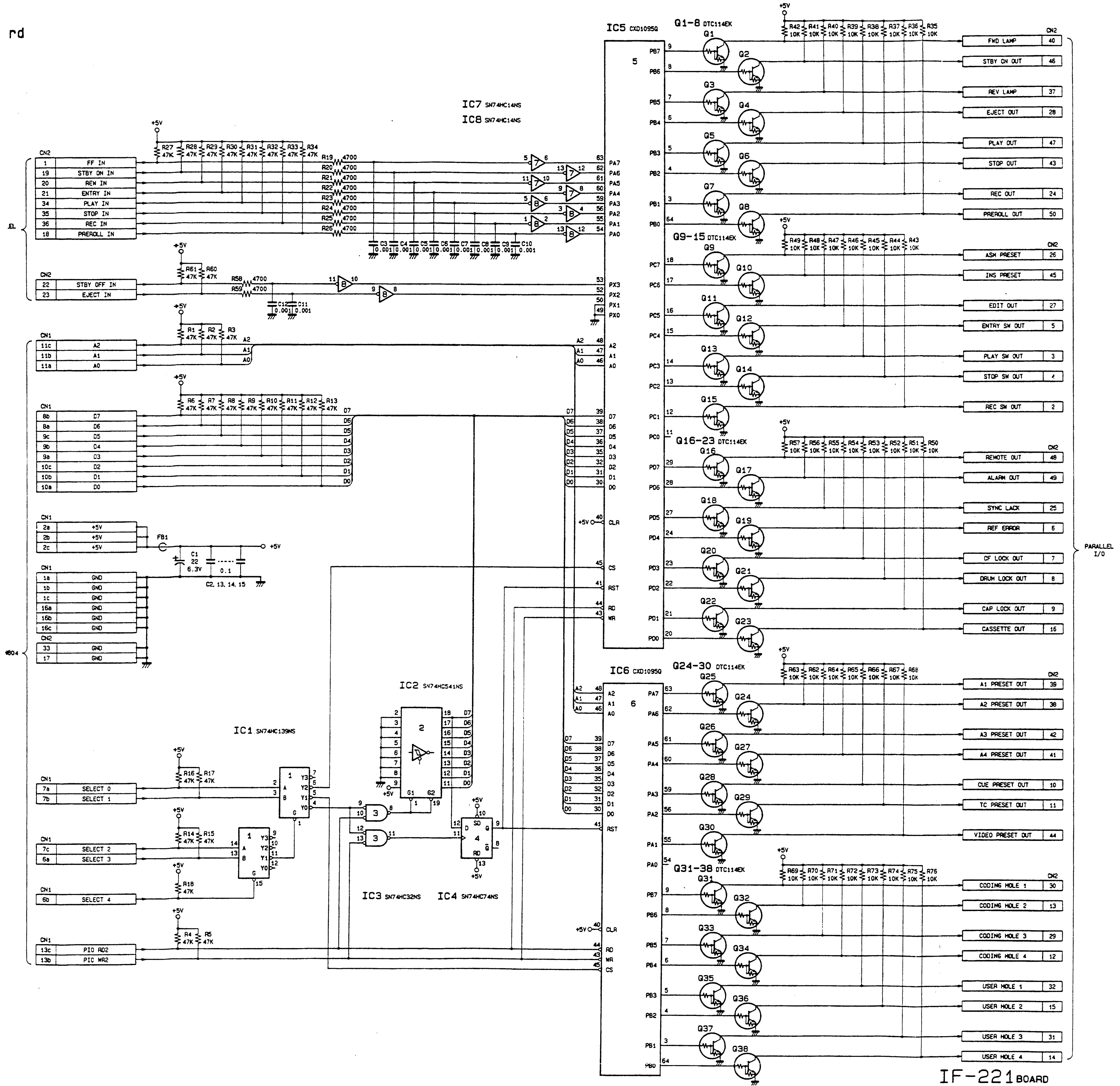
Ref. No.	Pin No.	
	+5V	GND
IC 1	14	7
IC 2	16	8
IC 3	26	4
IC 4	6	4
IC 5	16	5
IC 6	14	7
IC 7	16	5
IC 8	20	10

IF-221 BOARD

Parallel I/O Interface Board


IC7 SN74HC14NS
IC8 SN74HC14NS
+5V
CN2
FF IN
STBY ON IN
REW IN
ENTRY IN
PLAY IN
STOP IN
REC IN
PREROLL IN
PARALLEL I/O
R27 47K
R28 47K
R29 47K
R30 47K
R31 47K
R32 47K
R33 47K
R34 47K
R19 4700
R20 4700
R21 4700
R22 4700
R23 4700
R24 4700
R25 4700
R26 4700
C3 0.001
C4 0.001
C5 0.001
C6 0.001
C7 0.001
C8 0.001
C9 0.001
C10 0.001
STBY OFF IN
EJECT IN
R61 47K
R60 47K
R58 4700
R59 4700
C12 0.001
C11 0.001
CN1
A2
A1
A0
R1 47K
R2 47K
R3 47K
R6 47K
R7 47K
R8 47K
R9 47K
R10 47K
R11 47K
R12 47K
R13 47K
D7
D6
D5
D4
D3
D2
D1
D0
FB1
C1 22 6.3V
0.1
C2, 13, 14, 15
GND
IF-138, CN804
IC2 SN74HC541NS
IC1 SN74HC139NS
SELECT 0
SELECT 1
SELECT 2
SELECT 3
SELECT 4
R16 47K
R17 47K
R14 47K
R15 47K
R18 47K
R4 47K
R5 47K
PIO R/W2
PIO WR2
IC3 SN74HC32NS
IC4 SN74HC74NS

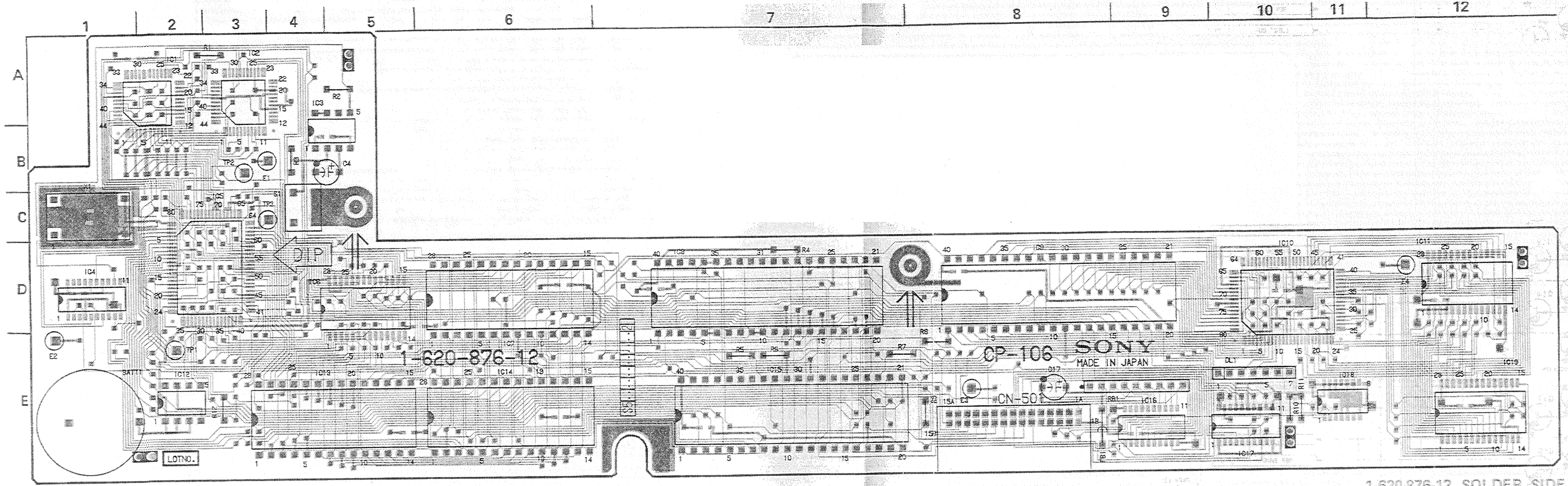
rd


IC5 CXD1095Q
Q1-8 DTC114EK
Q9-15 DTC114EK
Q16-23 DTC114EK
IC6 CXD1095Q
Q24-30 DTC114EK
Q31-38 DTC114EK
IC7 SN74HC14NS
IC8 SN74HC14NS
IC1 SN74HC139NS
IC2 SN74HC541NS
IC3 SN74HC32NS
IC4 SN74HC74NS
CN2
FF IN
STBY ON IN
REW IN
ENTRY IN
PLAY IN
STOP IN
REC IN
PREROLL IN
STBY OFF IN
EJECT IN
CN1
A2
A1
A0
D7
D6
D5
D4
D3
D2
D1
D0
+5V
GND
FB1
C1 22 6.3V
0.1
C2, 13, 14, 15
SELECT 0
SELECT 1
SELECT 2
SELECT 3
SELECT 4
PIO RD2
PIO WR2
PA7
PA6
PA5
PA4
PA3
PA2
PA1
PA0
PB7
PB6
PB5
PB4
PB3
PB2
PB1
PB0
PC7
PC6
PC5
PC4
PC3
PC2
PC1
PC0
PD7
PD6
PD5
PD4
PD3
PD2
PD1
PD0
PX3
PX2
PX1
PX0
CLR
CS
RST
RD
WR
FWD LAMP 40
STBY ON OUT 46
REV LAMP 37
EJECT OUT 28
PLAY OUT 47
STOP OUT 43
REC OUT 24
PREROLL OUT 50
ASM PRESET 26
INS PRESET 45
EDIT OUT 27
ENTRY SW OUT 5
PLAY SW OUT 3
STOP SW OUT 4
REC SW OUT 2
REMOTE OUT 48
ALARM OUT 49
SYNC LACK 25
REF ERROR 6
CF LOCK OUT 7
DRUM LOCK OUT 8
CAP LOCK OUT 9
CASSETTE OUT 16
A1 PRESET OUT 39
A2 PRESET OUT 38
A3 PRESET OUT 42
A4 PRESET OUT 41
CUE PRESET OUT 10
TC PRESET OUT 11
VIDEO PRESET OUT 44
CODING HOLE 1 30
CODING HOLE 2 13
CODING HOLE 3 29
CODING HOLE 4 12
USER HOLE 1 32
USER HOLE 2 15
USER HOLE 3 31
USER HOLE 4 14
PARALLEL I/O
R19-R26 4700
R27-R34 47K
R35-R75 10K
C3-C10 0.001
C11, C12 0.001
R58, R59 4700
R60, R61 47K
R1-R18 47K

IF-221 BOARD
BOARD NO.1-627-695-11
DVR-1000 (J) : #21301-
DVR-1000 (U/C) : #21001-
DVR-1000 (EK) : #11201-

CP-106 BOARD (1-620-876-12)

Component Side

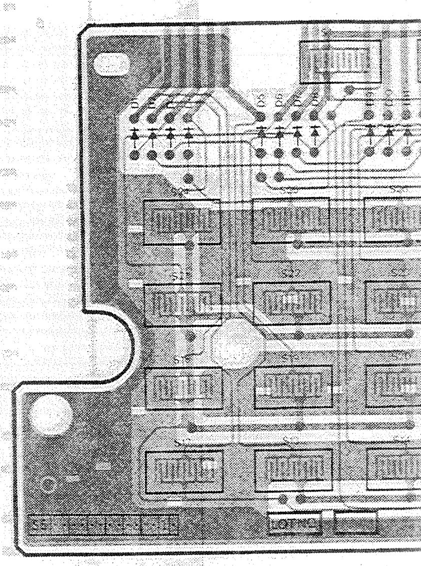

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
DIP
1-620-876-12
CP-106
SONY
MADE IN JAPAN
CN-501
LOTNO.
BATT1

1-620-876-12 COMPONENT SIDE

1-620-876-12 SOLDER SIDE

SW-158 BOARD (1-620-878-11)

Component Side

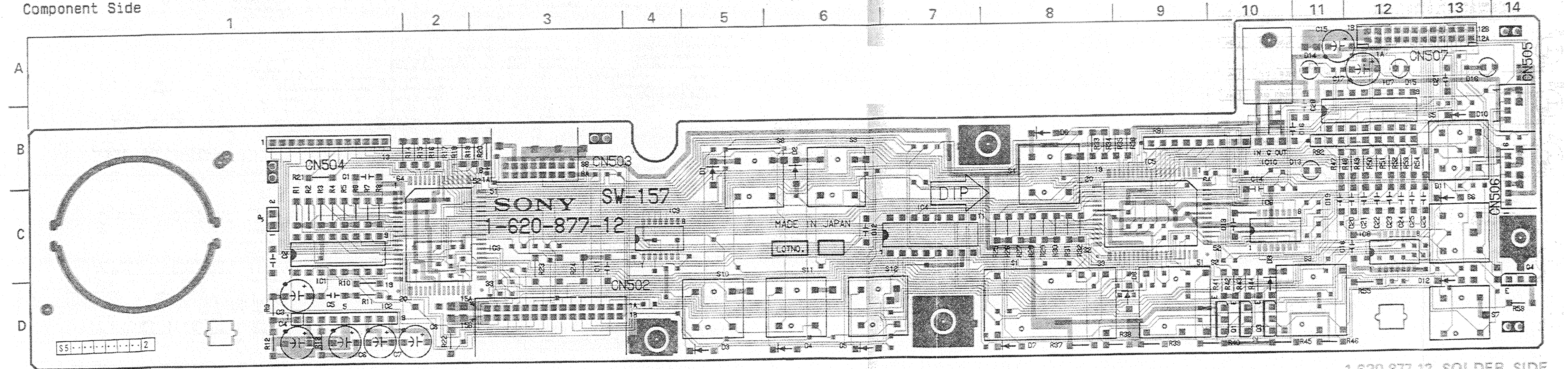


1-620-878-11 COMPONENT SIDE

CP-106 (1-6	
DVR-1000	
BATT1	E1
CN501M	E8
DL1	E10
E1	B3
E2	E1
E3	E8
E4	D12
FB1	E8
IC1	A2
IC2	A3
IC3	B5
IC4	D1
IC5	D3
IC6	D5
IC7	D6
IC8	D7
IC9	D8
IC10	D10
IC11	D12
IC12	E2
IC13	E5
IC14	E6
IC15	E7
IC16	E9
IC17	E10
IC18	E11
IC19	E12
RB1	E9
S1	C4
TP1	E2
TP2	B3
TP3	C3
X1	C1

SW-157 BOARD (1-620-877-12)

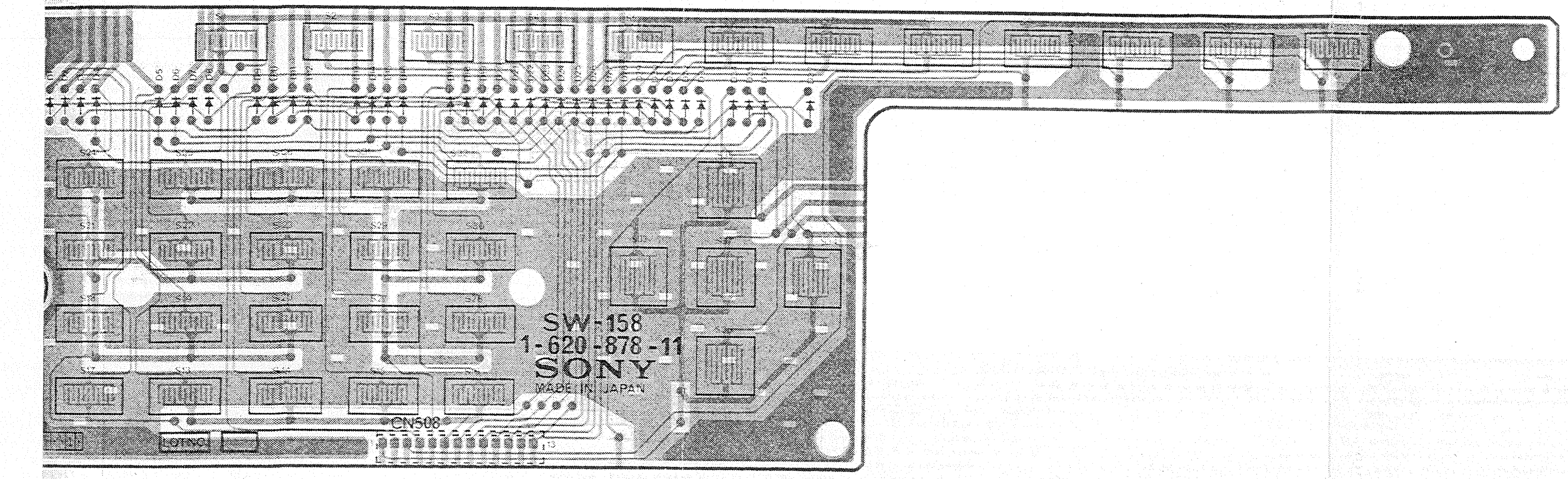
Component Side


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
CN504
CN503
CN502
CN505
CN506
CN507
SONY
SW-157
1-620-877-12
MADE IN JAPAN
LOTNO.
DIP
IN
OUT

1-620-877-12 COMPONENT SIDE

1-620-877-12 SOLDER SIDE

D (1-620-878-11)


SW-158
1-620-878-11
SONY
MADE IN JAPAN
CN508
LOT NO.

11 COMPONENT SIDE

1-620-878-11 SOLDER SIDE

CP-106 (1-620-876-11,12)

DVR-1000

BATT1	E1
CN501M	E8
DL1	E10
E1	B3
E2	E1
E3	E8
E4	D12
FB1	E8
IC1	A2
IC2	A3
IC3	B5
IC4	D1
IC5	D3
IC6	D5
IC7	D6
IC8	D7
IC9	D8
IC10	D10
IC11	D12
IC12	E2
IC13	E5
IC14	E6
IC15	E7
IC16	E9
IC17	E10
IC18	E11
IC19	E12
RB1	E9
S1	C4
TP1	E2
TP2	B3
TP3	C3
X1	C1

SW-157 (1-620-877-12)

DVR-1000

CN502M	D3
CN503M	B3
CN504M	B1
CN505M	B14
CN506M	C14
CN507M	A12
D1	B5
D2	B6
D3	D5
D4	D6
D5	D6
D6	B8
D7	D8
D8	D9
D9	D10
D10	B13
D11	C13
D12	D13
D13	B11
D14	A11
D15	A12
D16	A13
IC1	C1
IC2	D1
IC3	C2
IC4	C7
IC5	C9
IC6	C10
IC7	B12
IC8	C12
IC9	C4
IC10	A10
Q1	D10
Q2	D10
Q3	D10
Q4	D14
RB1	B9
RB2	B12
S1	D8
S2	D9
S3	D11
S4	B8
S5	B13
S6	C13
S7	D13
S8	B5
S9	B6
S10	D5
S11	D6
S12	D6

CP-106 BOARD

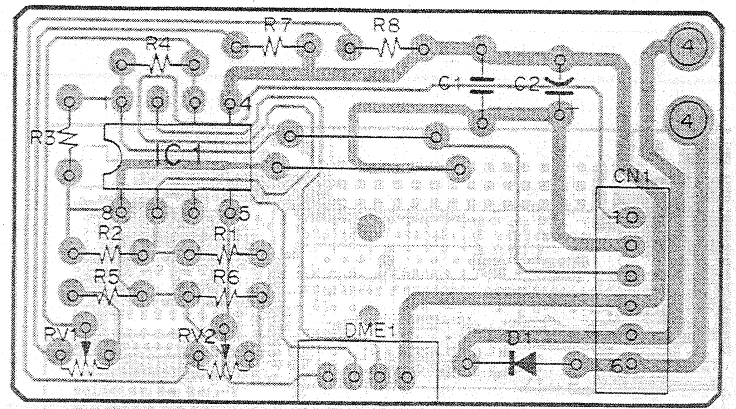
Ref. No.	Pin No.	
	+5V	GND
IC 1	38	16
IC 2	38	16
IC 3	8	4
IC 4	20	10
IC 5	33, 73	2, 12, 23, 42, 52, 63
IC 6	28	14
IC 7	28	14
IC 8	40	20
IC 9	40	20
IC 10	33, 73	2, 12, 23, 42, 52, 63
IC 11	28	14
IC 12	8	4
IC 13	28	14
IC 14	28	14
IC 15	40	20
IC 16	20	10
IC 17	20	10
IC 18	14	7
IC 19	28	14

SW-157 BOARD

Ref. No.	Pin No.	
	+5V	GND
IC 1	16	8
IC 2	9	5, 6
IC 3	26, 58	10, 27 42, 57
IC 4	16	8
IC 5	26, 58	10, 27 42, 57
IC 6	14	7
IC 7	16	8
IC 8	14	7
IC 9	14	7

DET-3 BOARD (1-618-489-11)

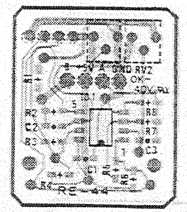
Component Side


R4
R7
R8
C1
C2
4
4
4
R3
IC1
CN1
8
5
10
R2
R1
R5
R6
RV1
RV2
DME1
D1
6

1-618-489-11 SOLDER SIDE

RE-44 BOARD (1-623-118-13)

Component Side



1-598-253-13 COMPONENT SIDE

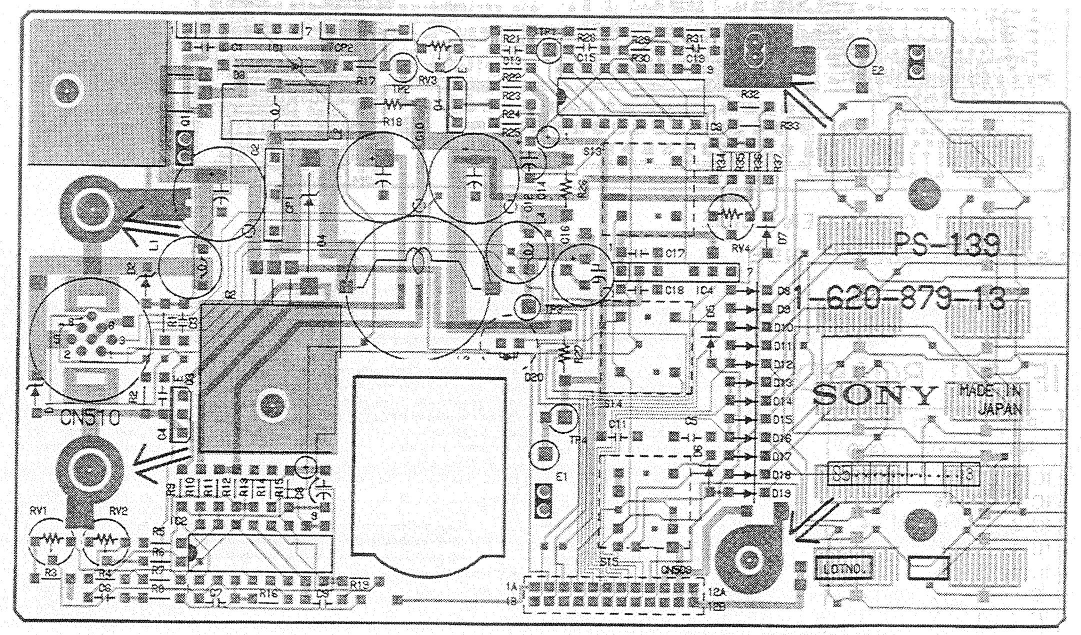
1-598-253-13 SOLDER SIDE

PS-139 BOARD (1-620-879-13)

Component Side

PS-139 BOARD

Ref. No.	Pin No.	
	+22V	GND
IC 1	1	3
IC 2	12	7
IC 3	12	7
IC 4	1	3


PS-139
1-620-879-13
SONY
MADE IN JAPAN
CN510
RV1
RV2
LOT NO.

1-620-879-13 COMPONENT SIDE

1-620-879-13 SOLDER SIDE

FUNCTION CONTROL PANEL

CP-106 BOARD
Function Control Panel

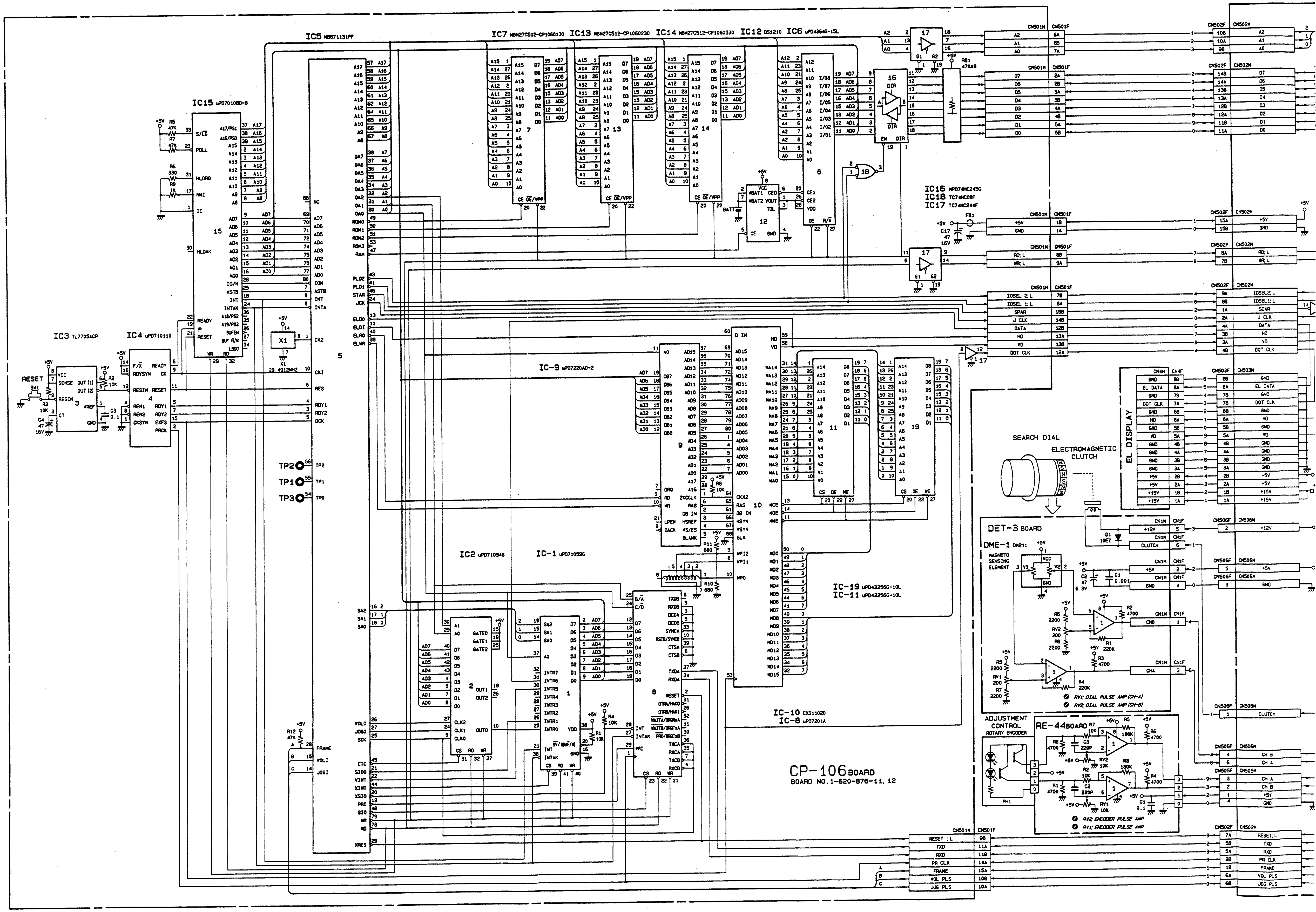
DET-3 BOARD
Search Dial Detector

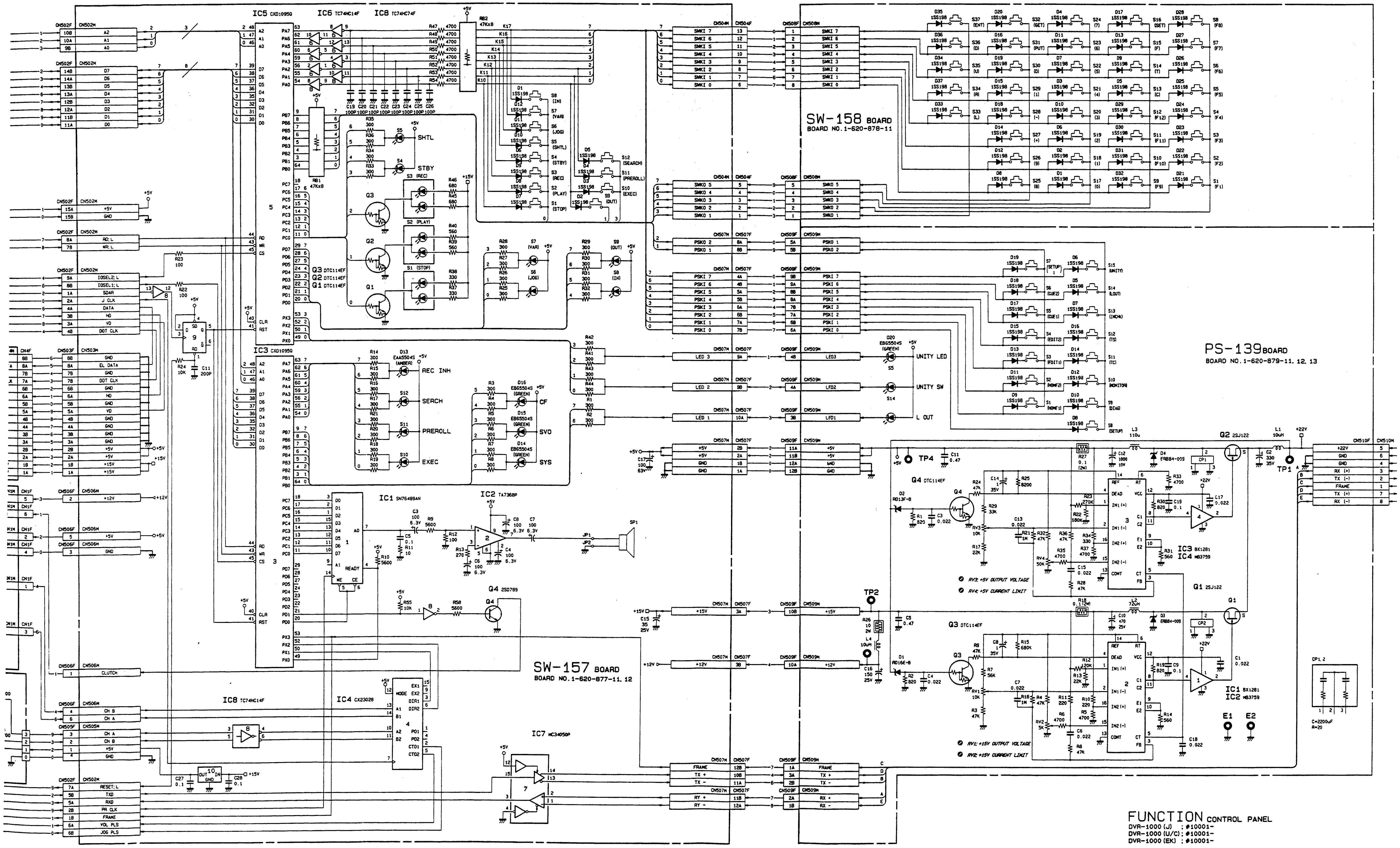
PS-139 BOARD
Power Supply Relaying

RE-44 BOARD
Rotary Encoder Detector

SW-157 BOARD
Switch

SW-158 BOARD
Switch

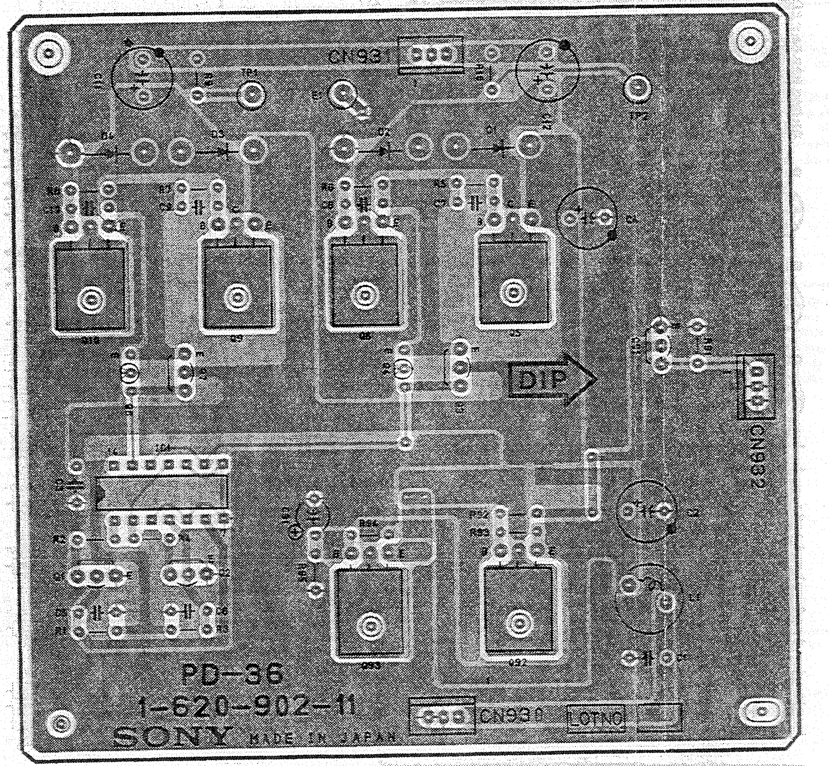

IC5 MB671131PF
IC7 MBM27C512-CP1060130
IC13 MBM27C512-CP1060230
IC14 MBM27C512-CP1060330
IC12 DS1210
IC6 uPD43646-15L
IC15 uPD70108D-8
IC3 TL7705ACP
IC4 uPD71011G
RESET
SW1
X1
29.4912MHz
TP2
TP1
TP3
IC-9 uPD7220AD-2
IC2 uPD71054G
IC-1 uPD71059G
IC-19 uPD43256G-10L
IC-11 uPD43256G-10L
IC-10 CXD1102Q
IC-8 uPD7201A
IC16 MPD74HC245G
IC18 TC74HC08F
IC17 TC74HC244F
SEARCH DIAL
ELECTROMAGNETIC CLUTCH
EL DISPLAY
DET-3 BOARD
DME-1 DM211
MAGNETO SENSING ELEMENT
CLUTCH
ADJUSTMENT CONTROL ROTARY ENCODER
RE-44 BOARD
RV1: DIAL PULSE AMP (CH-A)
RV2: DIAL PULSE AMP (CH-B)
RV2: ENCODER PULSE AMP
RV1: ENCODER PULSE AMP
CP-106 BOARD
BOARD NO. 1-620-876-11, 12
CN501M
CN501F
CN502F
CN502M
CN503F
CN503M
CN505F
CN505M
CN506F
CN506M
RESET: L
TXD
RXD
PR CLK
FRAME
VOL PLS
JOG PLS
IOSEL 2: L
IOSEL 1: L
SPAR
J CLK
DATA
HD
VD
DOT CLK
EL DATA
+5V
+12V
+15V
GND
CH A
CH B


IC5 CXD1095Q
IC6 TC74HC14F
IC8 TC74HC74F
IC3 CXD1095Q
IC1 SN75489AN
IC2 TA7368P
IC4 CX23028
IC7 MC34050P
IC8 TC74HC14F
SW-157 BOARD
BOARD NO. 1-620-877-11, 12
SW-158 BOARD
BOARD NO. 1-620-878-11
PS-139 BOARD
BOARD NO. 1-620-879-11, 12, 13
SHTL
STBY
REC INH
SERCH
PREROLL
EXEC
CF
SVO
SYS
UNITY LED
UNITY SW
L OUT
TP1
TP2
TP4
E1
E2
IC3 BX1281
IC4 MB3759
IC1 BX1281
IC2 MB3759
Q1 2SJ122
Q2 2SJ122
Q3 DTC114EF
Q4 DTC114EF
Q4 2SD789
RV3: +5V OUTPUT VOLTAGE
RV4: +5V CURRENT LIMIT
RV1: +15V OUTPUT VOLTAGE
RV2: +15V CURRENT LIMIT
SP1
CP1, 2
C=2200uF
R=20

FUNCTION CONTROL PANEL
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

PD-36 BOARD (1-620-902-11)

Component Side

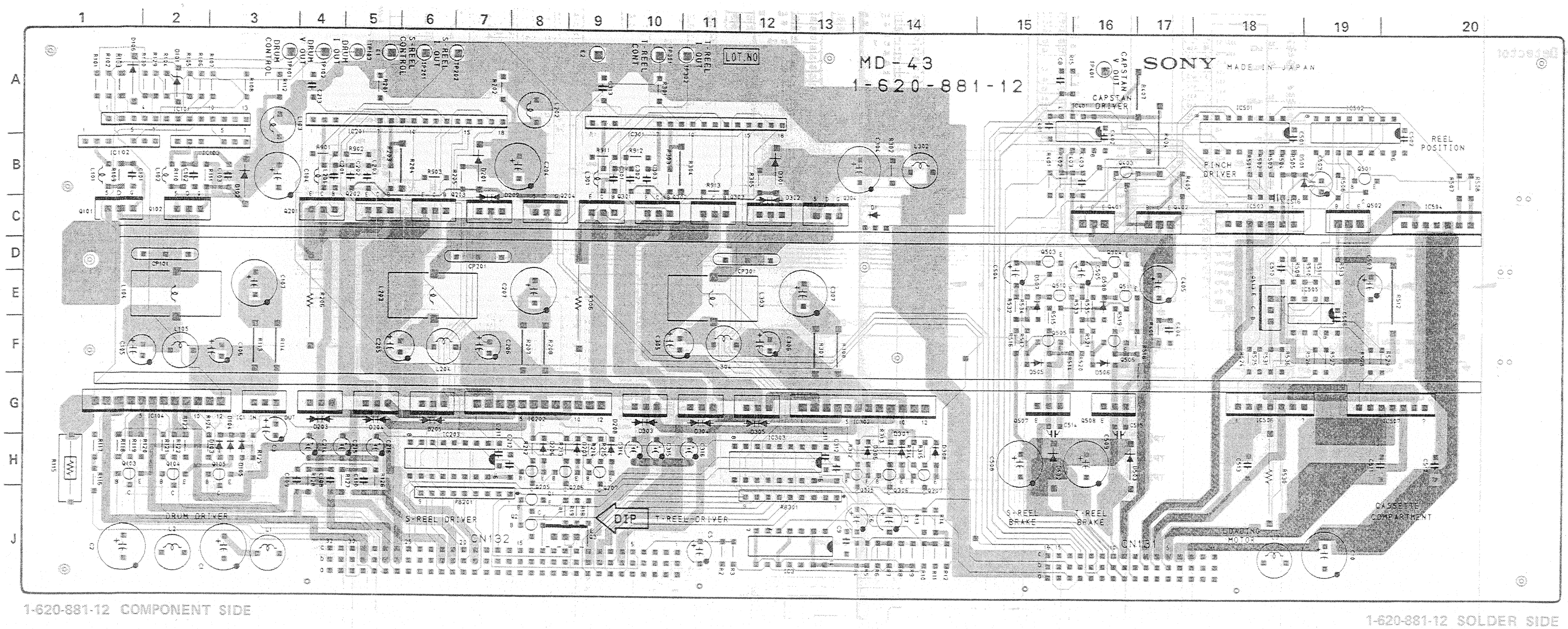

CN931
DIP
CN932
PD-36
1-620-902-11
SONY MADE IN JAPAN
CN930
LOT NO

1-620-902-11 COMPONENT SIDE

1-620-902-11 SOLDER SIDE

MD-43 BOARD (1-620-881-12)

Component Side


1
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13
14
15
16
17
18
19
20
A
B
C
D
E
F
G
H
J
MD-43
1-620-881-12
SONY
MADE IN JAPAN
LOT NO
DRUM CONTROL
DRUM V OUT
DRUM I OUT
S-REEL CONTROL
S-REEL I OUT
T-REEL CONT
T-REEL I OUT
CAPSTAN V OUT
CAPSTAN DRIVER
PINCH DRIVER
REEL POSITION
DRUM DRIVER
S-REEL DRIVER
DIP
T-REEL DRIVER
CN132
CN131
S-REEL BRAKE
T-REEL BRAKE
LOADING MOTOR
CASSETTE COMPARTMENT
1-620-881-12 COMPONENT SIDE
1-620-881-12 SOLDER SIDE

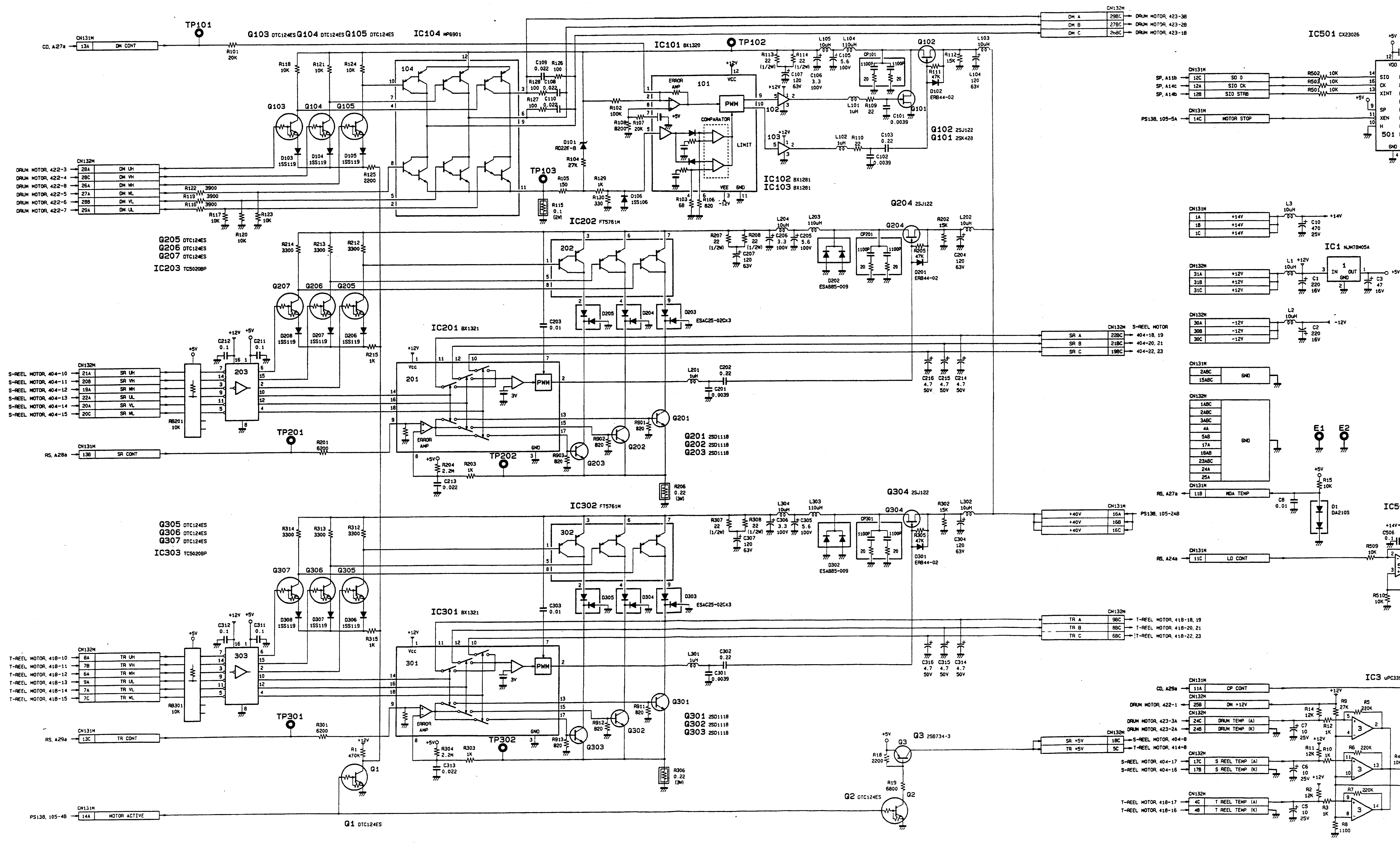
MD-43 (1-620-881-12)

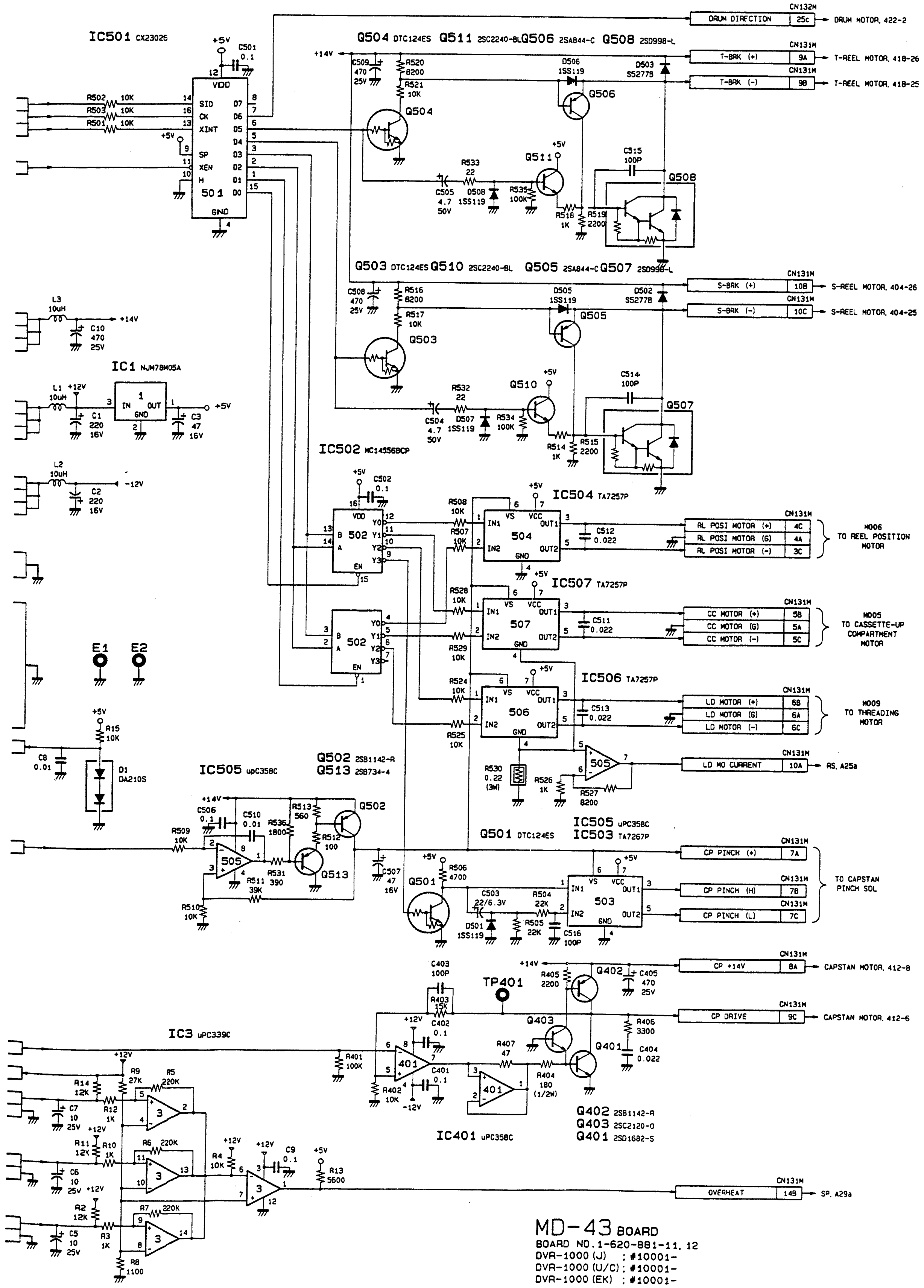
DVR-1000

CN131M	J16
CN132M	J7
CP101	D2
CP201	D7
CP301	D12
D1	C14
D101	A2
D102	B3
D103	H3
D104	H3
D105	H3
D106	A1
D201	B7
D202	B7
D203	G4
D204	G5
D205	G6
D206	H8
D207	H9
D208	H9
D301	B12
D302	C12
D303	G10
D304	G11
D305	G12
D306	H14
D307	H14
D308	H14
D501	B18
D502	H15
D503	H16
D505	F15
D506	F16
D507	E15
D508	E16
E1	A5
E2	A9
IC1	G3
IC3	J12
IC101	A2
IC102	B1
IC103	B2
IC104	G2
IC201	A5
IC202	G8
IC203	H6
IC301	A10
IC302	G14
IC303	H12
IC401	A16
IC501	A18
IC502	A19
IC503	C18
IC504	C20
IC505	E19
IC506	G18
IC507	G20
Q1	J8
Q2	J8
Q3	J8
Q101	C1
Q102	C2
Q103	H1
Q104	H2
Q105	H3
Q201	C4
Q202	C5
Q203	C6
Q204	C8
Q205	H8
Q206	H9
Q207	H9
Q301	C9
Q302	C10
Q303	C11
Q304	C13
Q305	H14
Q306	H14
Q307	H14
Q401	C16
Q402	C17
Q403	B16
Q501	B19
Q502	C19
Q503	D15
Q504	D16
Q505	F15
Q506	F16
Q507	G15
Q508	G16
Q510	E15
Q511	E16
Q513	E18
RB201	J7
RB301	J12
TP101	A3
TP102	A4
TP103	A5
TP201	A6
TP202	A7
TP301	A10
TP302	A11
TP401	A16

MD-43 BOARD

Motor Driver


TP101
TP102
TP103
TP201
TP202
TP301
TP302
Q103 DTC124ES
Q104 DTC124ES
Q105 DTC124ES
IC104 MP6901
IC101 BX1320
ERROR AMP
PWM
COMPARATOR
LIMIT
IC102 BX1281
IC103 BX1281
Q102 2SJ122
Q101 2SK428
IC202 FT5761M
IC302 FT5761M
Q204 2SJ122
Q304 2SJ122
Q205 DTC124ES
Q206 DTC124ES
Q207 DTC124ES
IC203 TC5020BP
Q305 DTC124ES
Q306 DTC124ES
Q307 DTC124ES
IC303 TC5020BP
IC201 BX1321
IC301 BX1321
Q201 2SD1118
Q202 2SD1118
Q203 2SD1118
Q301 2SD1118
Q302 2SD1118
Q303 2SD1118
D202 ESAB85-009
D302 ESAB85-009
D203 ESAC25-02Cx3
D303 ESAC25-02Cx3
D201 ERB44-02
D301 ERB44-02
D102 ERB44-02
Q1 DTC124ES
Q2 DTC124ES
Q3 2SB734-3
IC501 CX23026
IC1 NJM78M05A
IC3 uPC339
CN131M
CN132M
CD, A27a
DM CONT
SR CONT
TR CONT
MOTOR ACTIVE
MOTOR STOP
SIO 0
SIO CK
SIO STRB
NDA TEMP
LD CONT
CP CONT
DM +12V
DRUM TEMP (A)
DRUM TEMP (K)
S REEL TEMP (A)
S REEL TEMP (K)
T REEL TEMP (A)
T REEL TEMP (K)
DRUM MOTOR
S-REEL MOTOR
T-REEL MOTOR
+14V
+12V
-12V
+40V
+5V
GND
E1
E2


IC501 CX23026
IC502 MC14556BCP
IC1 NJM78M05A
IC3 uPC339C
IC401 uPC358C
IC504 TA7257P
IC507 TA7257P
IC506 TA7257P
IC505 uPC358C
IC503 TA7267P
Q504 DTC124ES Q511 2SC2240-BL Q506 2SA844-C Q508 2SD998-L
Q503 DTC124ES Q510 2SC2240-BL Q505 2SA844-C Q507 2SD998-L
Q502 2SB1142-R
Q513 2SB734-4
Q501 DTC124ES
Q402 2SB1142-R
Q403 2SC2120-O
Q401 2SD1682-S
DRUM DIRECTION
DRUM MOTOR, 422-2
T-BRK (+)
T-BRK (-)
T-REEL MOTOR, 418-26
T-REEL MOTOR, 418-25
S-BRK (+)
S-BRK (-)
S-REEL MOTOR, 404-26
S-REEL MOTOR, 404-25
RL POSI MOTOR (+)
RL POSI MOTOR (G)
RL POSI MOTOR (-)
M006 TO REEL POSITION MOTOR
CC MOTOR (+)
CC MOTOR (G)
CC MOTOR (-)
M005 TO CASSETTE-UP COMPARTMENT MOTOR
LD MOTOR (+)
LD MOTOR (G)
LD MOTOR (-)
M009 TO THREADING MOTOR
LD MO CURRENT
RS, A25a
CP PINCH (+)
CP PINCH (H)
CP PINCH (L)
TO CAPSTAN PINCH SOL
CP +14V
CAPSTAN MOTOR, 412-8
CP DRIVE
CAPSTAN MOTOR, 412-6
OVERHEAT
SP, A29a
TP401
E1
E2
CN131M
CN132M

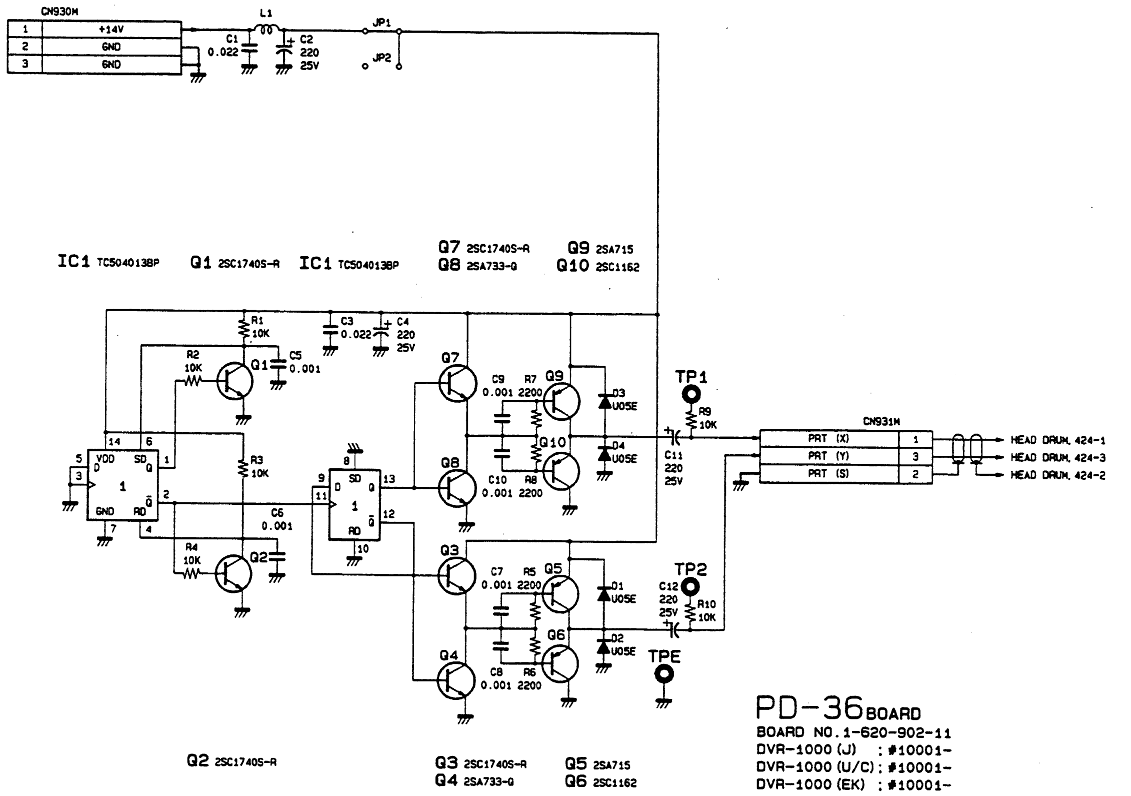
MD-43 BOARD
BOARD NO. 1-620-881-11, 12
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

MD-43 BOARD

Ref. No.	Pin No.				
	+14V	+12V	+5V	GND	−12V
IC 1	Refer to schematic diagram.				
IC 3		3		12	
IC 101		12		11	3
IC 102		1		3	
IC 103		1		3	
IC 104	Refer to schematic diagram.				
IC 201		1		3	
IC 202	Refer to schematic diagram.				
IC 203		16	1	8	
IC 301		1		3	
IC 302	Refer to schematic diagram.				
IC 303		16	1	8	
IC 401	8				4
IC 501			12	4	
IC 502			16	8	
IC 503			7	4	
IC 504			7	4	
IC 505	8			4	
IC 506			7	4	
IC 507			7	4	

PD-36 BOARD

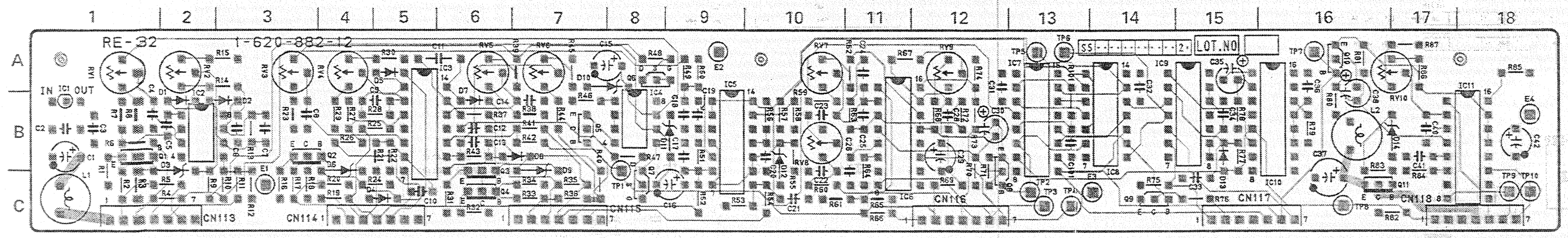
Power Rotary Trans Driver


CN930M
+14V
GND
GND
L1
C1 0.022
C2 220 25V
JP1
JP2
IC1 TC5040138P
Q1 2SC1740S-R
Q2 2SC1740S-R
Q7 2SC1740S-R
Q8 2SA733-Q
Q9 2SA715
Q10 2SC1162
Q3 2SC1740S-R
Q4 2SA733-Q
Q5 2SA715
Q6 2SC1162
TP1
TP2
TPE
CN931M
PRT (X)
PRT (Y)
PRT (S)
HEAD DRUM, 424-1
HEAD DRUM, 424-3
HEAD DRUM, 424-2

PD-36 BOARD
BOARD NO. 1-620-902-11
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

RE-32 BOARD (1-620-882-12)

Component Side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12
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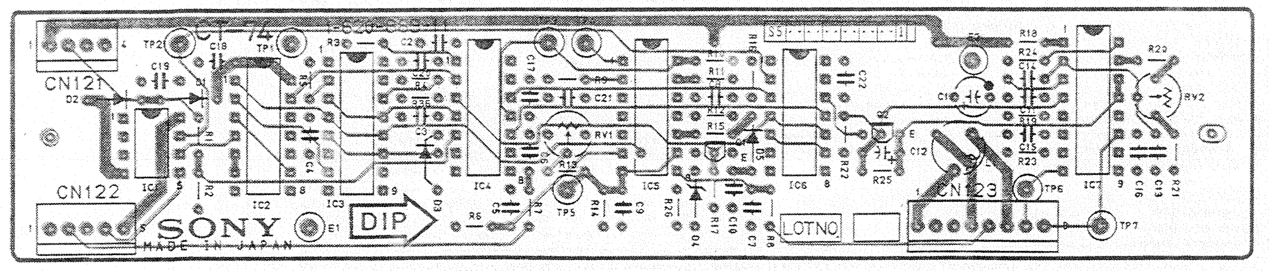
14
15
16
17
18
A
B
C
RE-32
1-620-882-12
IN
OUT
CN113
CN114
CN115
CN116
CN117
CN118
LOT.NO

1-620-882-12 COMPONENT SIDE

1-620-882-12 SOLDER SIDE

CT-74 BOARD (1-620-883-11)

Component Side


CN121
CN122
CN123
SONY
MADE IN JAPAN
DIP
LOTNO

1-620-883-11 COMPONENT SIDE

1-620-883-11 SOLDER SIDE

RE-32 (1-620-882-12)

DVR-1000

CN113F	C1
CN114F	C5
CN115F	C7
CN116F	C12
CN117F	C15
CN118F	C18
D1	B2
D2	B3
D3	B2
D4	C5
D5	A5
D6	B4
D7	B6
D8	B7
D9	B7
D10	A8
D11	B8
D12	B10
D13	B15
D14	B16
E1	C3
E2	A9
E3	C13
E4	B18
IC1	B1
IC2	B2
IC3	B5
IC4	B8
IC5	B9
IC6	B11
IC7	B13
IC8	B14
IC9	B15
IC10	B16
IC11	B18
Q1	B1
Q2	B3
Q3	B6
Q4	C6
Q5	B7
Q6	A8
Q7	C8
Q8	B12
Q9	C14
Q10	A16
Q11	C16
RV1	A1
RV2	A2
RV3	A3
RV4	A4
RV5	A6
RV6	A7
RV7	A10
RV8	B10
RV9	A12
RV10	A16
TP1	B8
TP2	C13
TP3	C13
TP4	C13
TP5	A13
TP6	A13
TP7	A16
TP8	C16
TP9	C18
TP10	C18

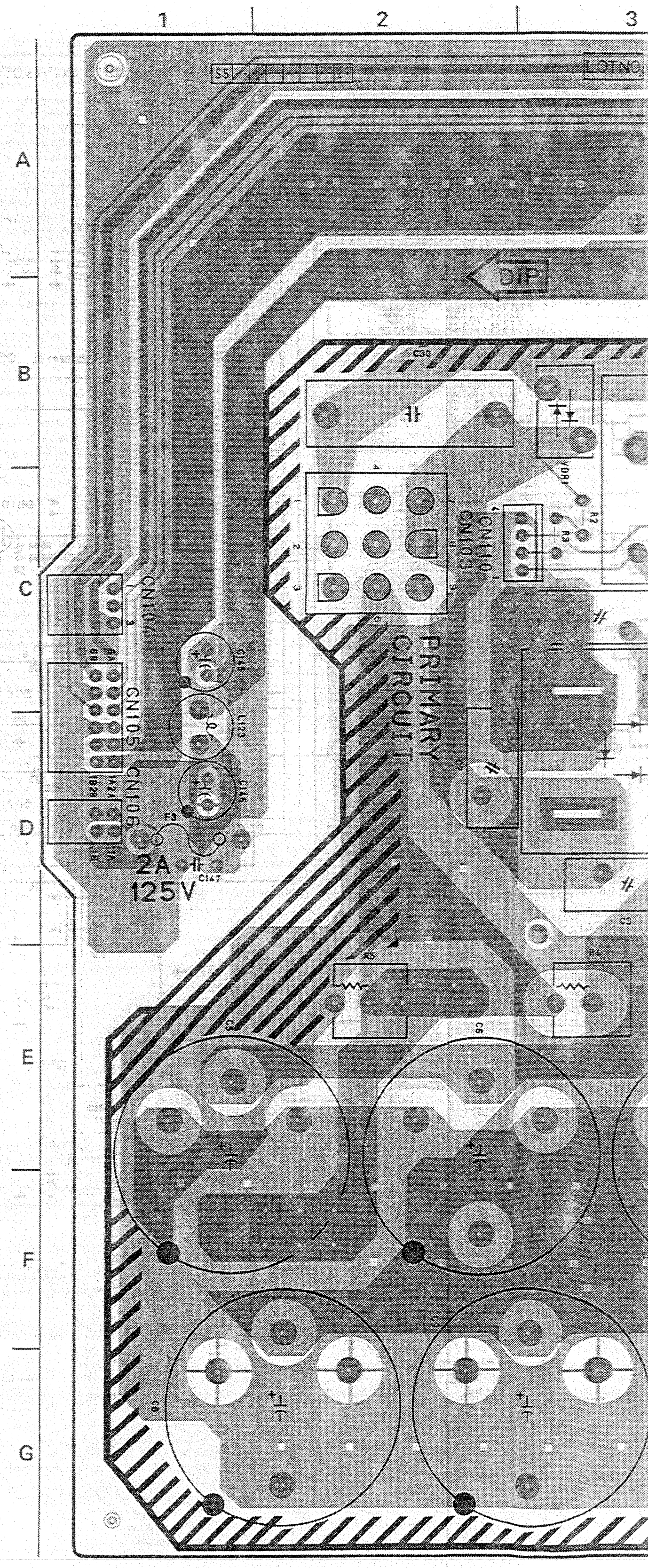
PS-138 (1-620-880-12)

DVR-1000

CN103M	C2
CN104M	C1
CN105M	D1
CN106M	D1
CN107M	A14
CN108M	A14
CN109M	B14
CN110M	C3
CN111M	G7
CN112M	G12
CN113M	A13
CN114M	A12
CN115M	A11
CN116M	A8
CN117M	A6
CN118M	A5
CN119M	C4
CN120M	G7
CP1	G12
CP101	E5
CP102	E6
CP103	E7
CP104	E8
CP105	E9
CP106	E10
CP107	E10
CP108	E11
CP109	E11
CP110	E12
CP111	E12
CP112	E13
D1	C3
D2	D3
D3	G12
D4	G13
D5	G13
D6	G13
D7	G13
D8	G13
D9	G12
D101	E5
D102	E6
D103	E7
D104	E8
D105	E9
D106	E10
D107	E10
D108	E11
D109	E11
D110	E12
D111	E12
D112	E13
D113	D4
D114	C6
D115	C6
D116	D7
F1	A5
F2	A3
F3	D1
F10	C4
F11	E4
IC1	G5
IC2	G6
IC3	G8
IC4	G9
IC5	G10
IC6	G11
IC7	G7
IC101	B9
IC102	B10
IC103	B12
IC104	B12
IC105	B14
Q1	G5
Q2	G6
Q3	G8
Q4	G9
Q5	G10
Q6	G11
Q7	G13
Q8	F13
Q101	B7
Q102	B10
Q103	B11
Q104	B11
Q105	B12
Q106	B13
RY1	C3
T1	G5
T2	G6
T3	G8
T4	G9
T6	G11
T7	E6
T8	E7
T9	F11
T10	E12
VDR1	B3

PS-138 BOARD (1-620-880-12)

Component Side


1
2
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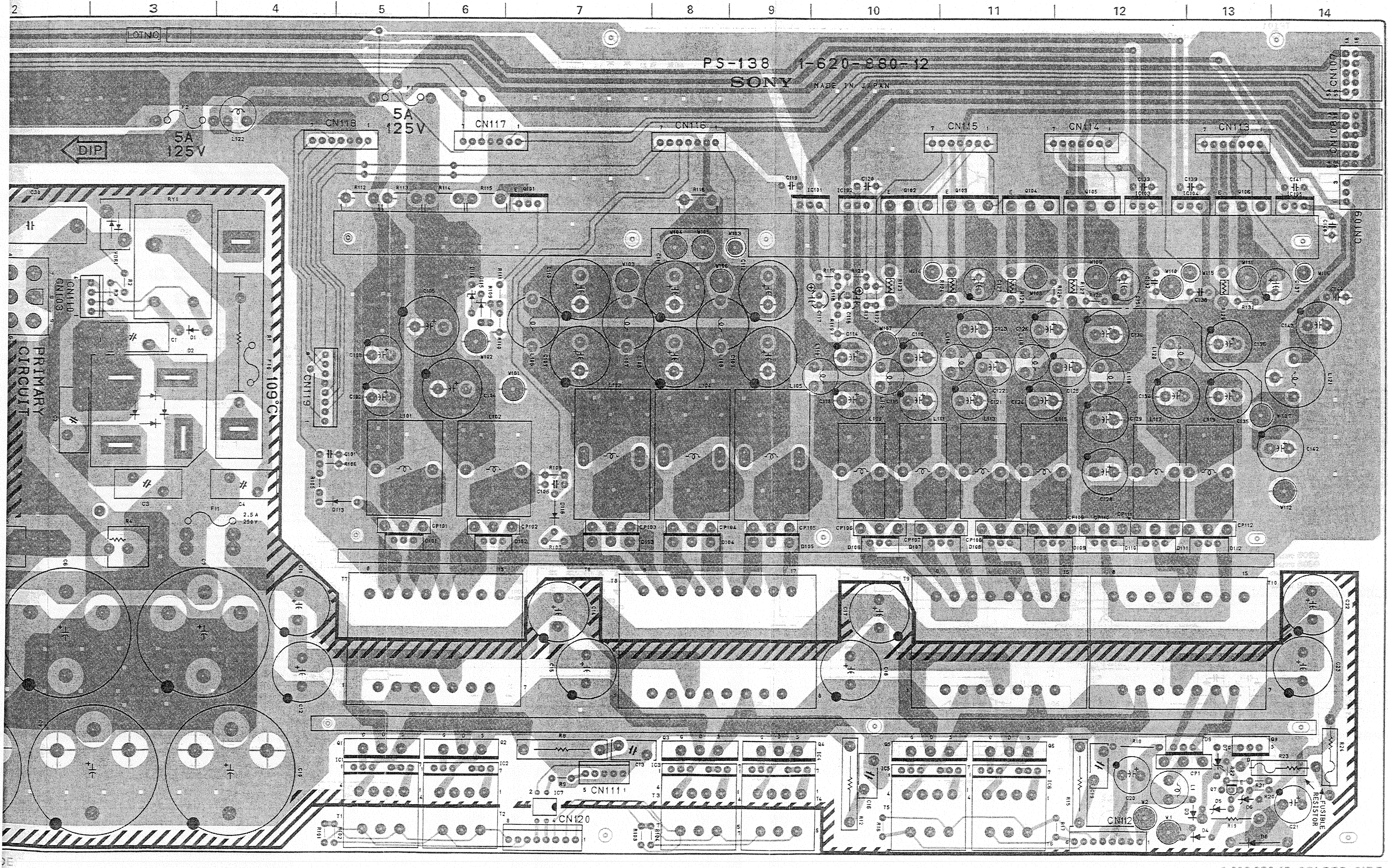
A
B
C
D
E
F
G
LOTNO
DIP
PRIMARY CIRCUIT
CN103
CN104
CN105
CN106
CN107
2A
125V

1-620-880-12 COMPONENT SIDE


2
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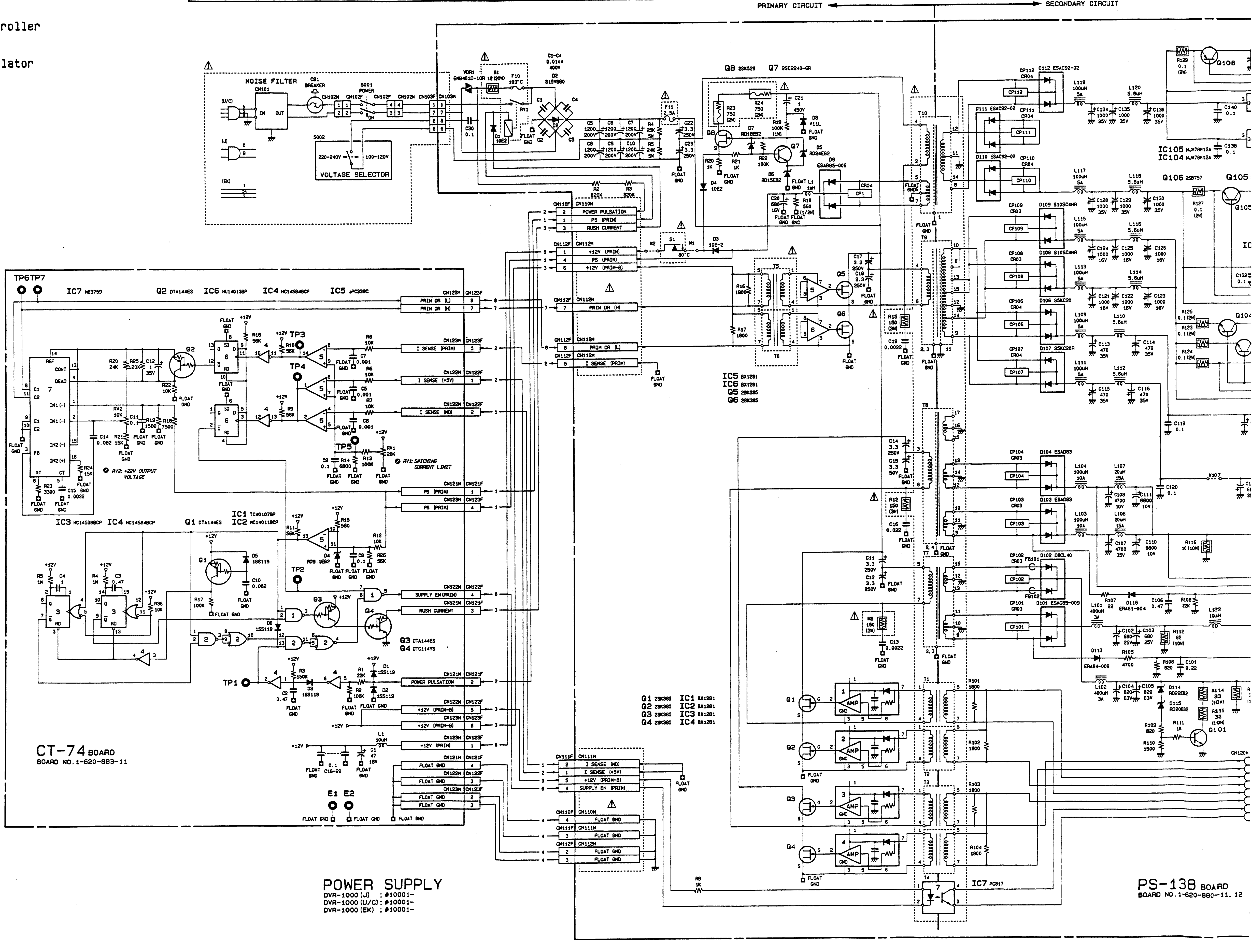
9
10
11
12
13
14
LOTNO
PS-138 1-620-880-12
SONY
MADE IN JAPAN
DIP
5A
125V
5A
125V
CN118
CN117
CN116
CN115
CN114
CN113
CN110
CN108
CN109
CN119
PRIMARY CIRCUIT
109°C
2.5A
250V
RY1
CN111
CN120
CN112
FUSIBLE RESISTOR

1-620-880-12 SOLDER SIDE

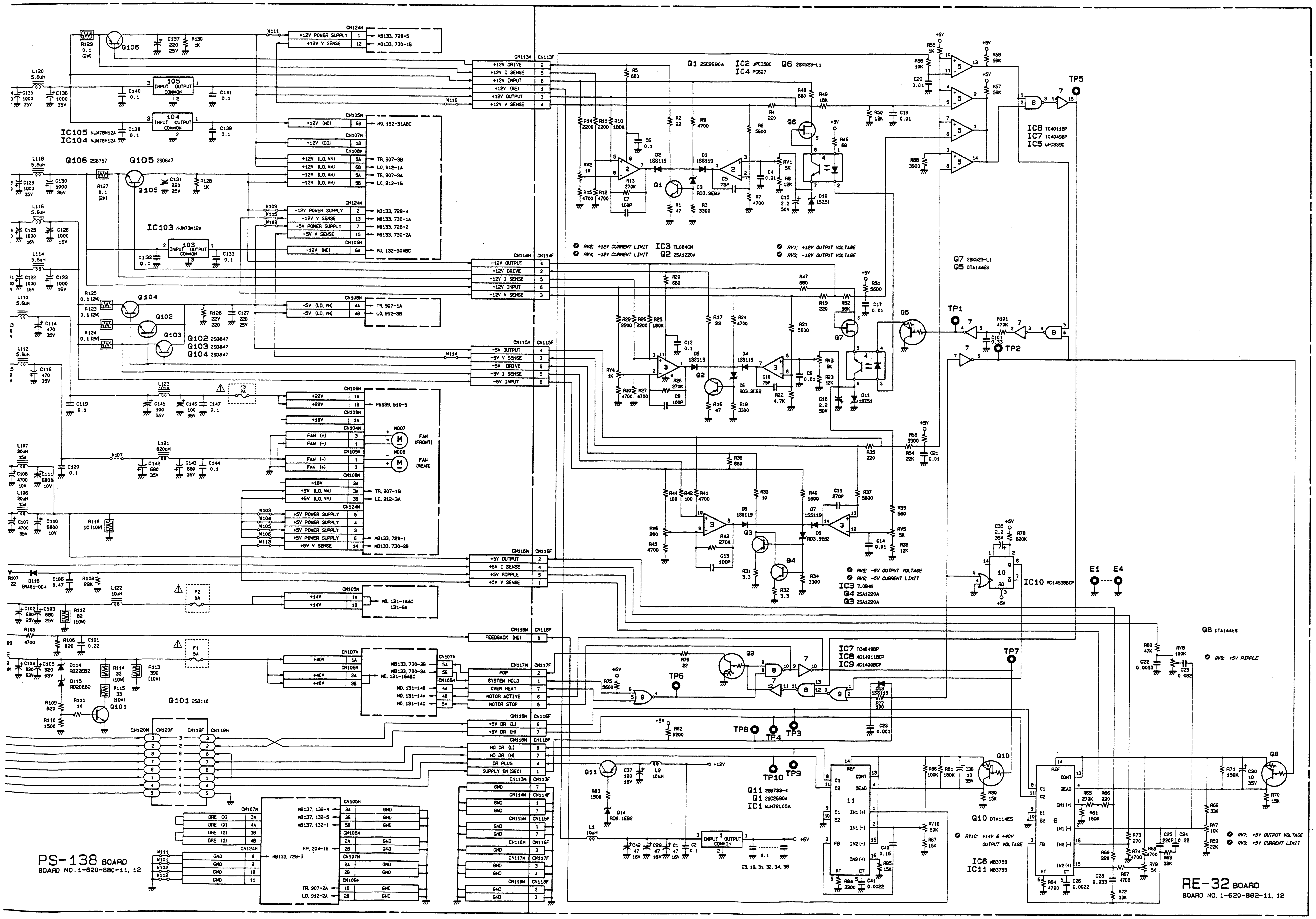
POWER SUPPLY

CT-74 **BOARD** : Regulator Controller
PS-138 **BOARD** : Power Supply
RE-32 **BOARD** : Switching Regulator


PRIMARY CIRCUIT ◄── ──► SECONDARY CIRCUIT
NOISE FILTER
CB1 BREAKER
S001 POWER
S002
220-240V 100-120V
VOLTAGE SELECTOR
(U/C)
(J)
(EK)
Q8 2SK528
Q7 2SC2240-GR
IC105 NJM78M12A
IC104 NJM78M12A
Q106 2SB757
Q105
POWER PULSATION
PS (PRIM)
RUSH CURRENT
+12V (PRIM)
+12V (PRIM-B)
PRIM DR (L)
PRIM DR (H)
I SENSE (PRIM)
I SENSE (+5V)
I SENSE (MD)
SUPPLY EN (PRIM)
FLOAT GND
TP6 TP7
IC7 M63759
Q2 DTA144ES
IC6 MU14013BP
IC4 MC14584BCP
IC5 uPC339C
TP3
TP4
TP5
TP2
TP1
RV2: +22V OUTPUT VOLTAGE
RV1: SWITCHING CURRENT LIMIT
IC3 MC14538BCP
IC4 MC14584BCP
Q1 DTA144ES
IC1 TC4017BP
IC2 MC14011BCP
Q3 DTA144ES
Q4 DTC114YS
IC5 BX1281
IC6 BX1281
G5 2SK385
G6 2SK385
Q1 2SK385
Q2 2SK385
Q3 2SK385
Q4 2SK385
IC1 BX1281
IC2 BX1281
IC3 BX1281
IC4 BX1281
IC7 PC817
Q101
E1 E2
CT-74 BOARD
BOARD NO.1-620-883-11
PS-138 BOARD
BOARD NO.1-620-880-11, 12

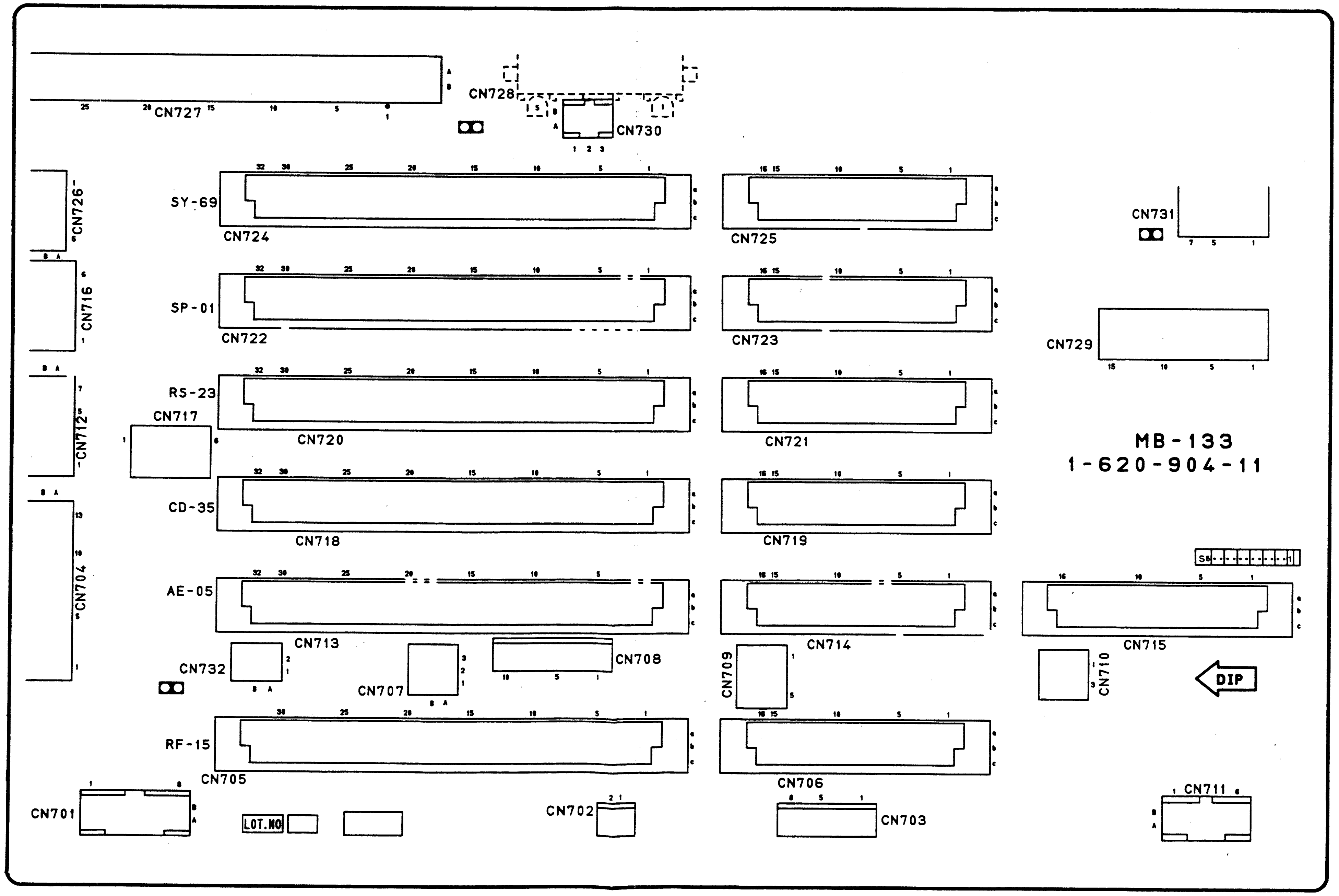
POWER SUPPLY
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

UIT


PS-138 BOARD
BOARD NO. 1-620-880-11, 12
RE-32 BOARD
BOARD NO. 1-620-882-11, 12
IC105 NJM78M12A
IC104 NJM78M12A
IC103 NJM79M12A
Q106 2SB757
Q105 2SD847
Q102 2SD847
Q103 2SD847
Q104 2SD847
Q101 2SD118
Q1 2SC2690A
IC2 uPC358C
Q6 2SK523-L1
IC4 PC827
IC8 TC4011BP
IC7 TC4049BP
IC5 uPC339C
RV2: +12V CURRENT LIMIT
RV4: -12V CURRENT LIMIT
IC3 TL084CN
Q2 2SA1220A
RV1: +12V OUTPUT VOLTAGE
RV3: -12V OUTPUT VOLTAGE
Q7 2SK523-L1
Q5 DTA144ES
RV5: -5V OUTPUT VOLTAGE
RV6: -5V CURRENT LIMIT
IC3 TL084N
Q4 2SA1220A
Q3 2SA1220A
IC10 MC14538BCP
E1
E4
Q8 DTA144ES
RV8: +5V RIPPLE
IC7 TC4049BP
IC8 MC14011BCP
IC9 MC14008CP
Q11 2SB733-4
Q1 2SC2690A
IC1 NJM78L05A
RV10: +14V & +40V OUTPUT VOLTAGE
Q10 DTA114ES
IC6 MB3759
IC11 MB3759
RV7: +5V OUTPUT VOLTAGE
RV9: +5V CURRENT LIMIT
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
FAN (FRONT)
FAN (REAR)
C3, 19, 31, 32, 34, 36

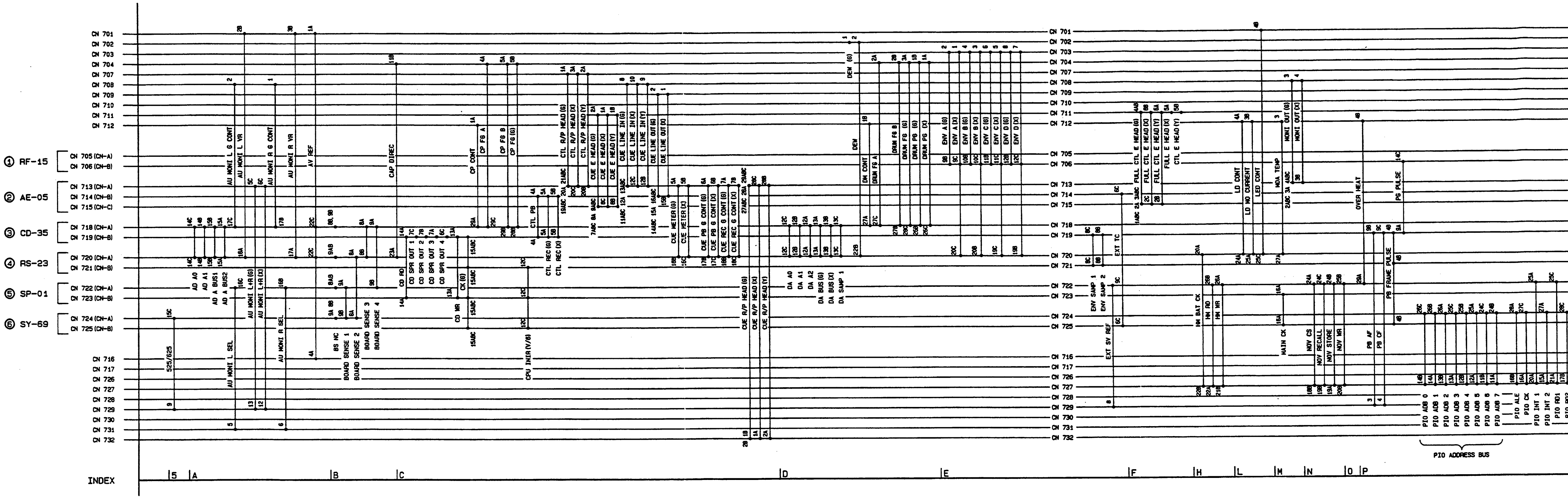
MB-133 BOARD (1-620-904-11)

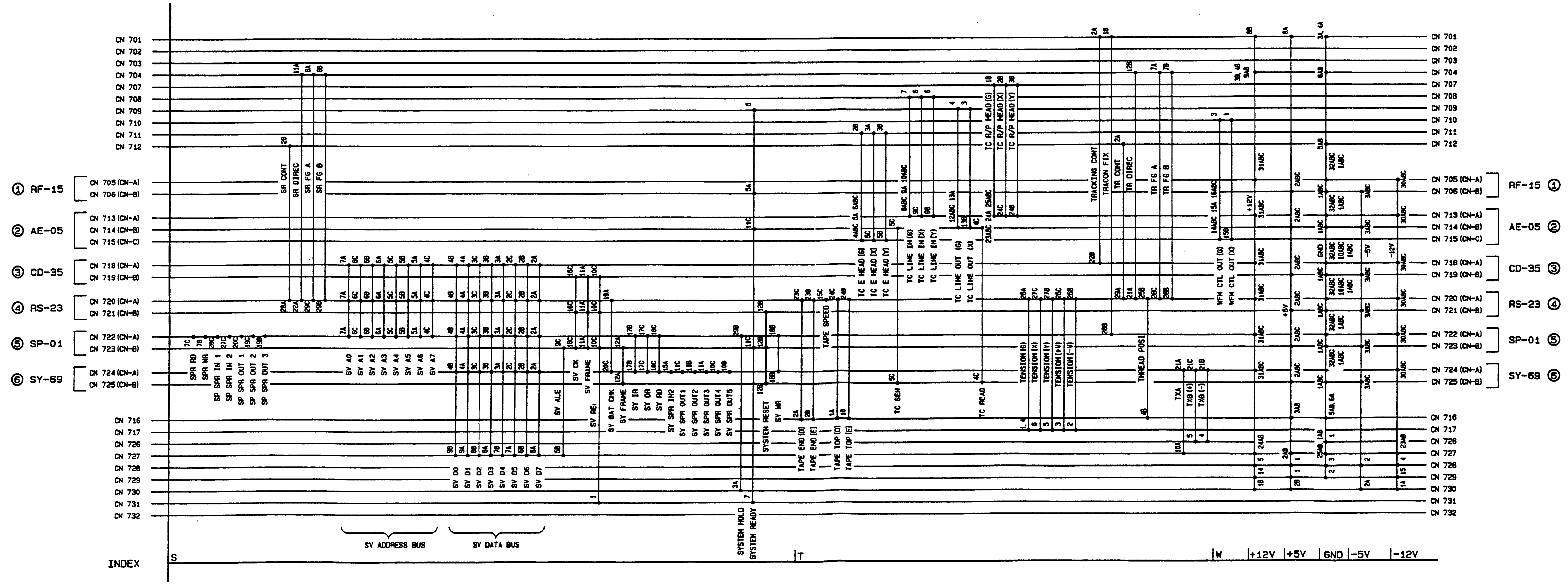
Component Side

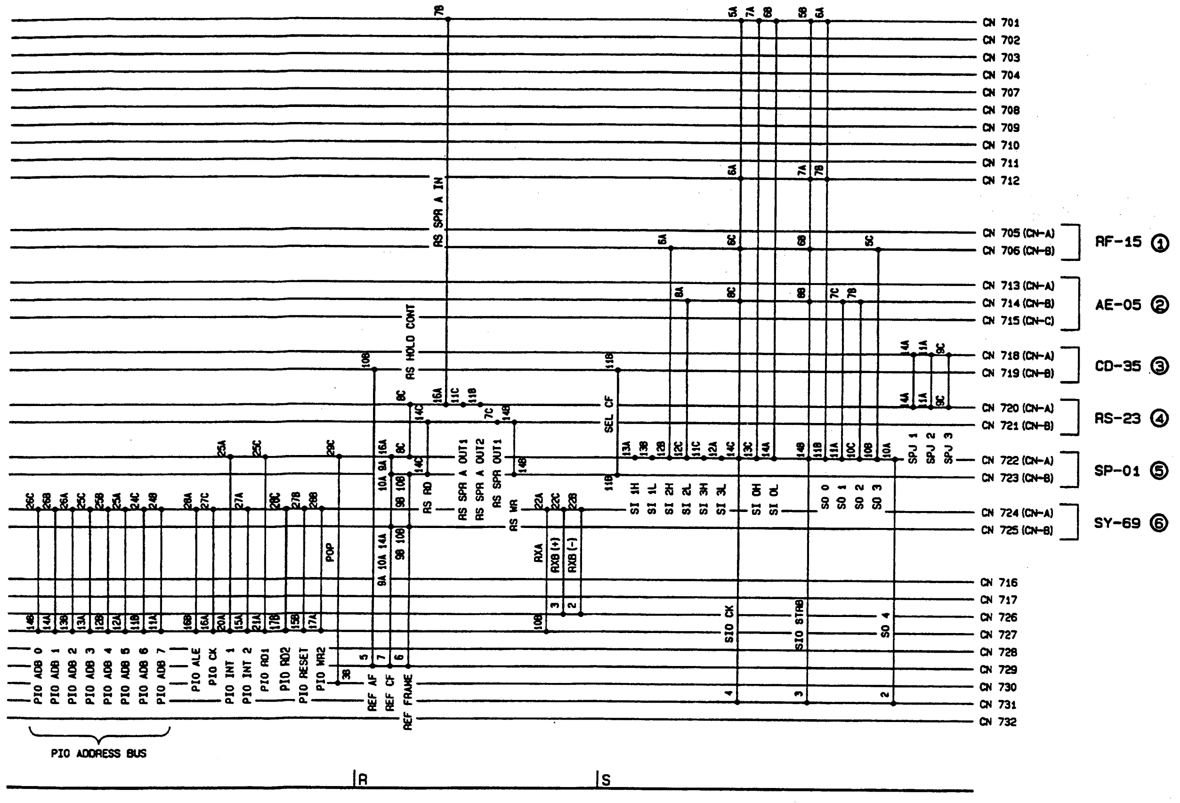

CN727
CN728
CN730
SY-69
CN724
CN725
CN731
CN726
CN716
SP-01
CN722
CN723
CN729
RS-23
CN717
CN712
CN720
CN721
MB-133
1-620-904-11
CD-35
CN718
CN719
CN704
AE-05
CN713
CN714
CN715
CN732
CN707
CN708
CN709
CN710
DIP
RF-15
CN705
CN706
CN711
CN701
LOT.NO
CN702
CN703

MB-133 BOARD

Mother Board

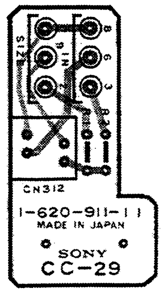

CN 701
CN 702
CN 703
CN 704
CN 707
CN 708
CN 709
CN 710
CN 711
CN 712
① RF-15
CN 705 (CN-A)
CN 706 (CN-B)
② AE-05
CN 713 (CN-A)
CN 714 (CN-B)
CN 715 (CN-C)
③ CD-35
CN 718 (CN-A)
CN 719 (CN-B)
④ RS-23
CN 720 (CN-A)
CN 721 (CN-B)
⑤ SP-01
CN 722 (CN-A)
CN 723 (CN-B)
⑥ SY-69
CN 724 (CN-A)
CN 725 (CN-B)
CN 716
CN 717
CN 726
CN 727
CN 728
CN 729
CN 730
CN 731
CN 732
PIO ADDRESS BUS
INDEX
5
A
B
C
D
E
F
H
L
M
N
O
P


CN 701
CN 702
CN 703
CN 704
CN 707
CN 708
CN 709
CN 710
CN 711
CN 712
① RF-15
CN 705 (CN-A)
CN 706 (CN-B)
② AE-05
CN 713 (CN-A)
CN 714 (CN-B)
CN 715 (CN-C)
③ CD-35
CN 718 (CN-A)
CN 719 (CN-B)
④ RS-23
CN 720 (CN-A)
CN 721 (CN-B)
⑤ SP-01
CN 722 (CN-A)
CN 723 (CN-B)
⑥ SY-69
CN 724 (CN-A)
CN 725 (CN-B)
CN 716
CN 717
CN 726
CN 727
CN 728
CN 729
CN 730
CN 731
CN 732
SV ADDRESS BUS
SV DATA BUS
SYSTEM HOLD
SYSTEM READY
INDEX
S
T
W
+12V
+5V
GND
-5V
-12V


CN 701
CN 702
CN 703
CN 704
CN 707
CN 708
CN 709
CN 710
CN 711
CN 712
CN 705 (CN-A)
CN 706 (CN-B)
RF-15 ①
CN 713 (CN-A)
CN 714 (CN-B)
CN 715 (CN-C)
AE-05 ②
CN 718 (CN-A)
CN 719 (CN-B)
CD-35 ③
CN 720 (CN-A)
CN 721 (CN-B)
RS-23 ④
CN 722 (CN-A)
CN 723 (CN-B)
SP-01 ⑤
CN 724 (CN-A)
CN 725 (CN-B)
SY-69 ⑥
CN 716
CN 717
CN 726
CN 727
CN 728
CN 729
CN 730
CN 731
CN 732
RS SPR A IN
RS HOLD CONT
SEL CF
RS RD
RS SPR A OUT1
RS SPR A OUT2
RS SPR OUT1
RS WR
RXA
RXB (+)
RXB (-)
SI 1H
SI 1L
SI 2H
SI 2L
SI 3H
SI 3L
SI OH
SI OL
SO 0
SO 1
SO 2
SO 3
SO 4
SPJ 1
SPJ 2
SPJ 3
SIO CK
SIO STRB
POP
PIO ADB 0
PIO ADB 1
PIO ADB 2
PIO ADB 3
PIO ADB 4
PIO ADB 5
PIO ADB 6
PIO ADB 7
PIO ALE
PIO CK
PIO INT 1
PIO INT 2
PIO RD1
PIO RD2
PIO RESET
PIO WR2
REF AF
REF CF
REF FRAME
PIO ADDRESS BUS
R
S

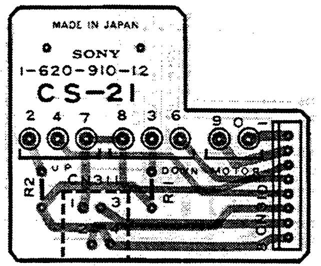
MB-133 BOARD
BOARD NO.1-320-904-11
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

CC-29 BOARD (1-620-911-11)
Component Side


CN312
1-620-911-11
MADE IN JAPAN
SONY
CC-29

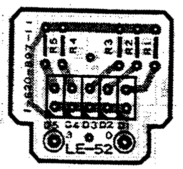
1-620-911-11 COMPONENT SIDE
1-620-911-11 SOLDER SIDE

CS-21 BOARD (1-620-910-12)
Component Side


MADE IN JAPAN
SONY
1-620-910-12
CS-21
2 4 7 8 3 6 9 0
UP
DOWN
MOTOR
CN311
R2

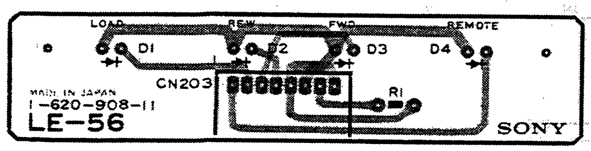
1-620-910-12 COMPONENT SIDE
1-620-910-12 SOLDER SIDE

LE-52 BOARD (1-620-897-11)
Component Side


R5 R4 R3 R2 R1
D4 D3 D2 D1
LE-52

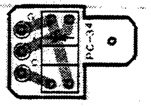
1-620-897-11 COMPONENT SIDE
1-620-897-11 SOLDER SIDE

LE-56 BOARD (1-620-908-11)
Component Side


LOAD
REW
FWD
REMOTE
D1
D2
D3
D4
CN203
R1
MADE IN JAPAN
1-620-908-11
LE-56
SONY

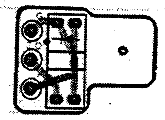
1-620-908-11 COMPONENT SIDE
1-620-908-11 SOLDER SIDE

PC-34
BOARD (1-620-895-11)
Component Side



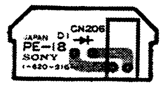
1-620-895-11 COMPONENT SIDE
1-620-895-11 SOLDER SIDE

PC-37
BOARD (1-621-344-11)
Component Side



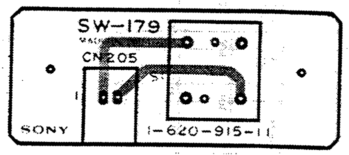
1-621-344-11 COMPONENT SIDE
1-621-344-11 SOLDER SIDE

PE-18
BOARD (1-620-916-11)
Component Side


JAPAN
D1
CN206
PE-18
SONY

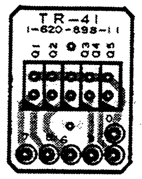
1-620-916-11 COMPONENT SIDE
1-620-916-11 SOLDER SIDE

SW-179
BOARD (1-620-915-11)
Component Side


SW-179
CN205
SONY
1-620-915-11

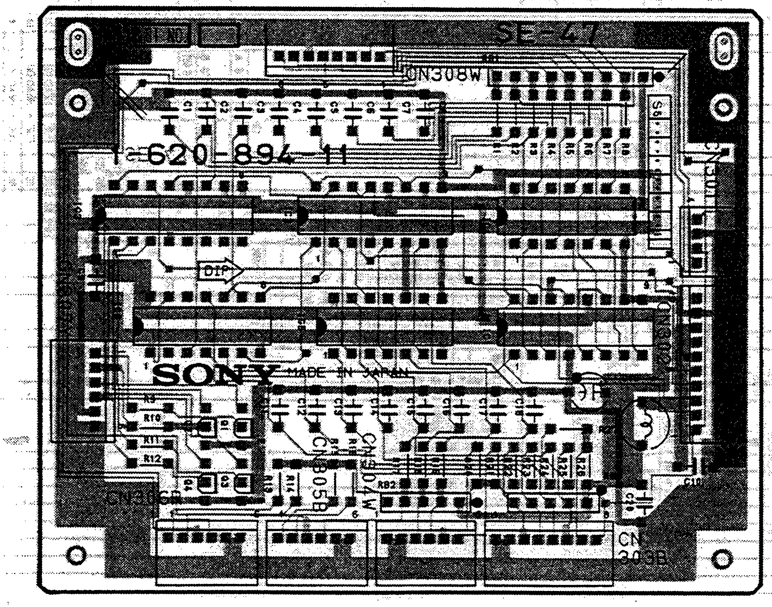
1-620-915-11 COMPONENT SIDE
1-620-915-11 SOLDER SIDE

TR-41 BOARD (1-620-898-11)
Component Side


TR-41
1-620-898-11

1-620-898-11 COMPONENT SIDE
1-620-898-11 SOLDER SIDE

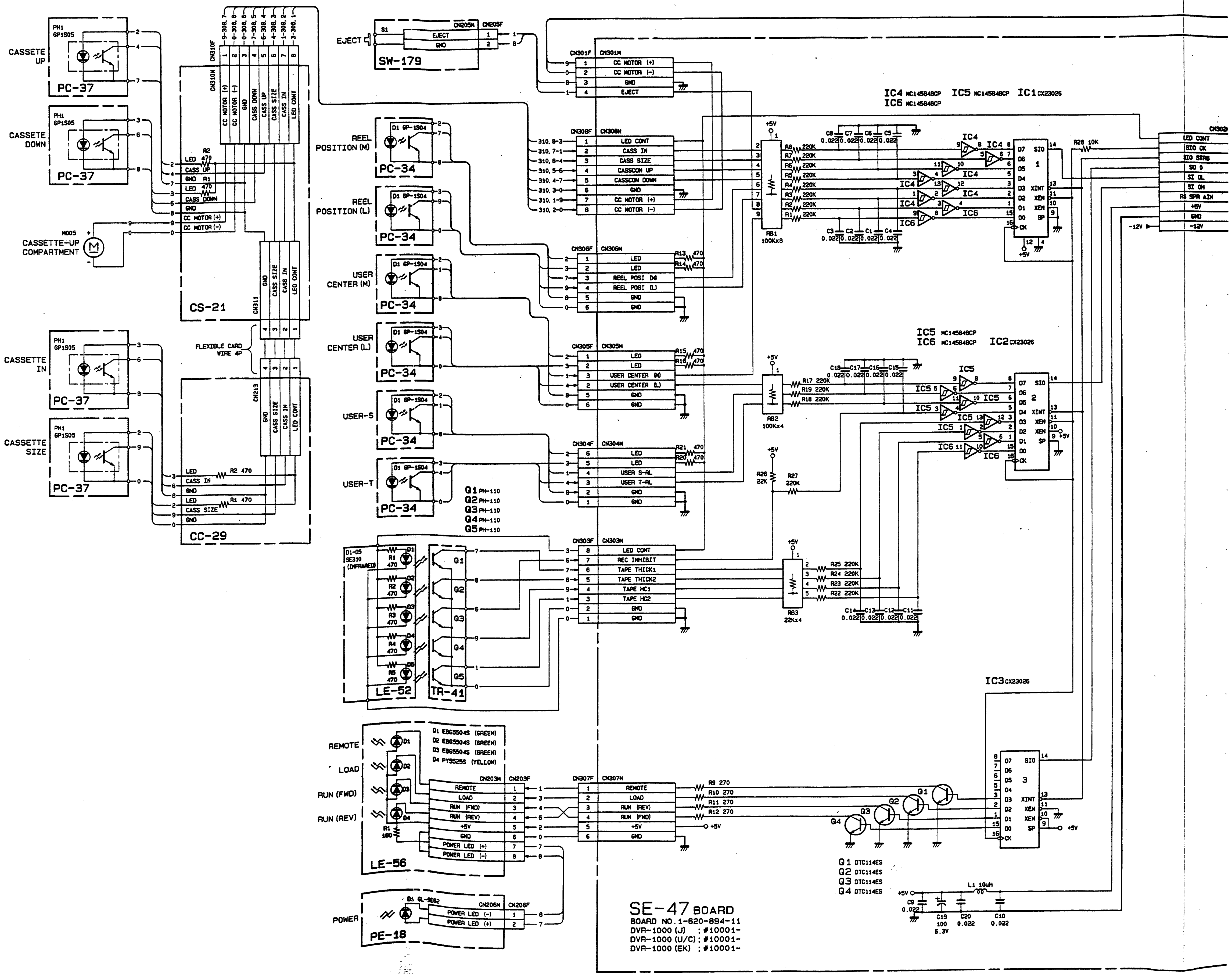
SE-47 BOARD (1-620-894-11)
Component Side

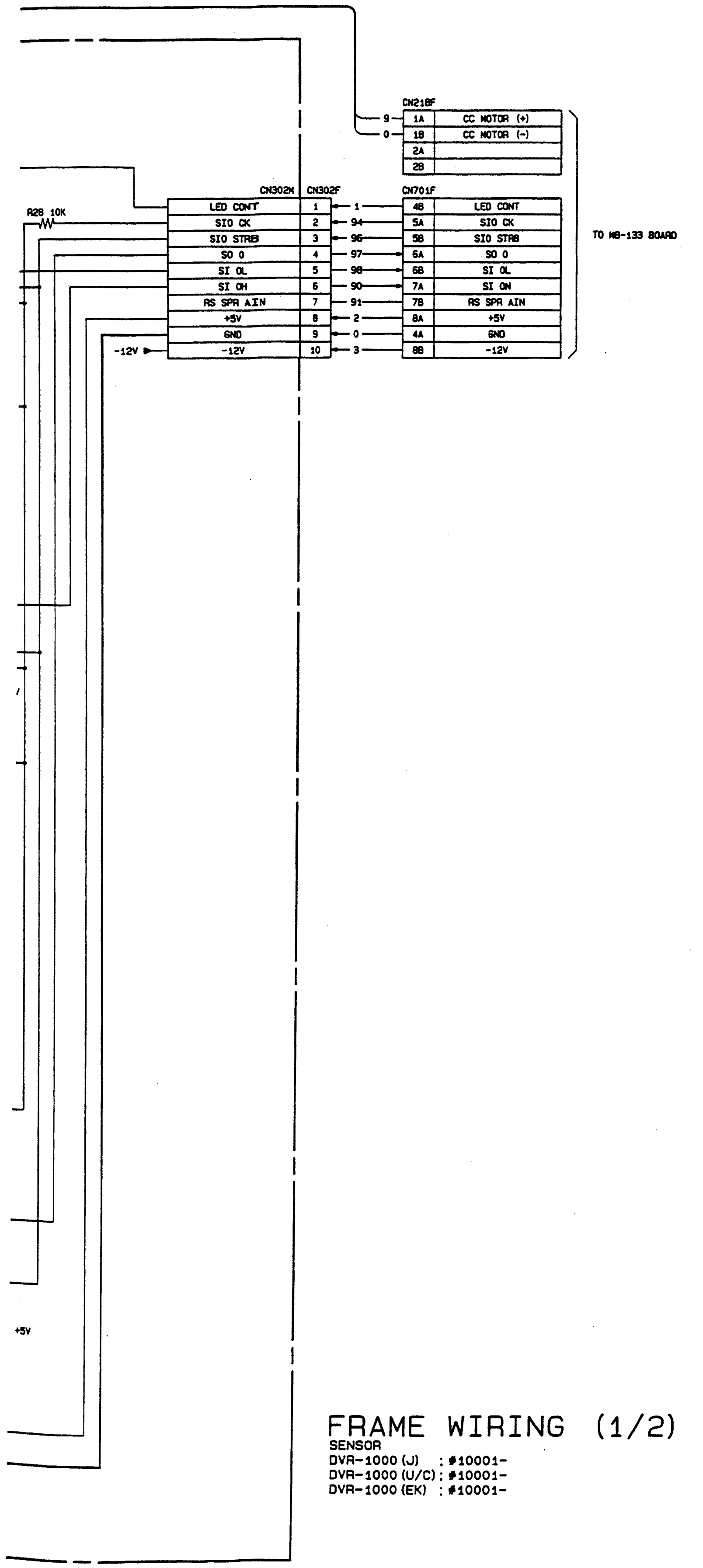

SE-47
CN308W
1-620-894-11
DIP
SONY
MADE IN JAPAN
CN305B
CN306B
CN308B

1-620-894-11 COMPONENT SIDE
1-620-894-11 SOLDER SIDE

FRAME WIRING (1/2) : SENSOR

CC-29	**BOARD** Cassette Controller (MOVE)
CS-21	**BOARD** Cassette Controller (FIX)
LE-52	**BOARD** Coding Hole Sensor (LED)
LE-56	**BOARD** Indicator (LOAD & RUN)
PC-34	**BOARD** Sensor User Hole & Reel Position
PC-37	**BOARD** Sensor Cassete IN/UP/DOWN
PE-18	**BOARD** Power, Indicator
SE-47	**BOARD** Sensor, Relaying
SW-179	**BOARD** Eject, Switch
TR-41	**BOARD** Coding Hole Sensor (PTR)


CASSETE UP
PH1 GP1S05
PC-37
CASSETE DOWN
CASSETTE IN
CASSETTE SIZE
M005
CASSETTE-UP COMPARTMENT
CN310F
CN310M
CC MOTOR (+)
CC MOTOR (-)
GND
CASS DOWN
CASS UP
CASS SIZE
CASS IN
LED CONT
9-308, 7
0-308, 8
0-308, 6
7-308, 5
6-308, 4
4-308, 3
1-308, 2
3-308, 1
LED
R2 470
R1 470
CS-21
CN311
FLEXIBLE CARD WIRE 4P
CN213
CC-29
EJECT
S1
CN205M
CN205F
SW-179
REEL POSITION (M)
REEL POSITION (L)
USER CENTER (M)
USER CENTER (L)
USER-S
USER-T
D1 GP-1S04
PC-34
Q1 PH-110
Q2 PH-110
Q3 PH-110
Q4 PH-110
Q5 PH-110
D1-D5 SE310 (INFRARED)
LE-52
TR-41
REMOTE
LOAD
RUN (FWD)
RUN (REV)
D1 EB65504S (GREEN)
D2 EB65504S (GREEN)
D3 EB65504S (GREEN)
D4 PY5525S (YELLOW)
R1 180
LE-56
CN203M
CN203F
POWER LED (+)
POWER LED (-)
POWER
D1 GL-5EG2
CN206M
CN206F
PE-18
CN301F
CN301M
EJECT
CN308F
CN308M
CASSCON UP
CASSCON DOWN
310, 8-3
310, 7-1
310, 6-4
310, 5-6
310, 4-7
310, 3-0
310, 1-9
310, 2-0
CN306F
CN306M
REEL POSI (M)
REEL POSI (L)
R13 470
R14 470
CN305F
CN305M
USER CENTER (M)
USER CENTER (L)
R15 470
R16 470
CN304F
CN304M
USER S-RL
USER T-RL
R21 470
R20 470
CN303F
CN303M
REC INHIBIT
TAPE THICK1
TAPE THICK2
TAPE HC1
TAPE HC2
CN307F
CN307M
+5V
RB1 100Kx8
R1–R8 220K
C1–C8 0.022
IC4 MC14584BCP
IC5 MC14584BCP
IC1 CX23026
IC6 MC14584BCP
D7 D6 D5 D4 D3 D2 D1 D0 CK
SIO XINT XEN XEN SP
R28 10K
CN302
LED CONT
SIO CK
SIO STRB
SO 0
SI OL
SI OH
RS SPR AIN
-12V
RB2 100Kx4
R17 220K
R19 220K
R18 220K
C15–C18 0.022
IC2 CX23026
R26 22K
R27 220K
RB3 22Kx4
R22–R25 220K
C11–C14 0.022
IC3 CX23026
R9 270
R10 270
R11 270
R12 270
Q1 DTC114ES
Q2 DTC114ES
Q3 DTC114ES
Q4 DTC114ES
L1 10uH
C9 0.022
C19 100 6.3V
C20 0.022
C10 0.022
SE-47 BOARD
BOARD NO. 1-620-894-11
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-


CN218F
9
0
1A
CC MOTOR (+)
1B
CC MOTOR (-)
2A
2B
CN302M
CN302F
CN701F
R28 10K
LED CONT
SIO CK
SIO STRB
SO 0
SI OL
SI OH
RS SPR AIN
+5V
GND
-12V
-12V
1
2
3
4
5
6
7
8
9
10
1
94
96
97
98
90
91
2
0
3
4B
5A
5B
6A
6B
7A
7B
8A
4A
8B
LED CONT
SIO CK
SIO STRB
SO 0
SI OL
SI ON
RS SPR AIN
+5V
GND
-12V
TO MB-133 BOARD
+5V

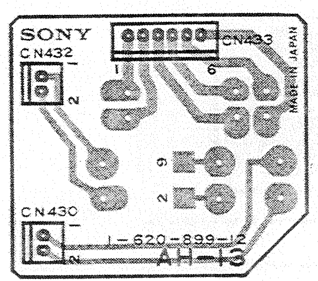
SE-47 BOARD

Ref. No.	Pin No.	
	+5V	GND
IC 1	12	4
IC 2	12	4
IC 3	12	4
IC 4	14	7
IC 5	14	7
IC 6	14	7

FRAME WIRING (1/2)
SENSOR
DVR-1000 (J) : #10001-
DVR-1000 (U/C) : #10001-
DVR-1000 (EK) : #10001-

AH-13 BOARD (1-620-899-12)

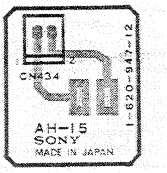
Component Side


SONY
CN432
CN433
CN430
MADE IN JAPAN
1-620-899-12
AH-13

1-620-899-12 COMPONENT SIDE
1-620-899-12 SOLDER SIDE

AH-15 BOARD (1-620-947-12)

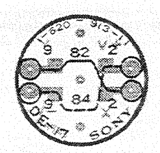
Component Side


CN434
AH-15
SONY
MADE IN JAPAN
1-620-947-12

1-620-947-12 COMPONENT SIDE
1-620-947-12 SOLDER SIDE

DE-17 BOARD (1-620-913-11)

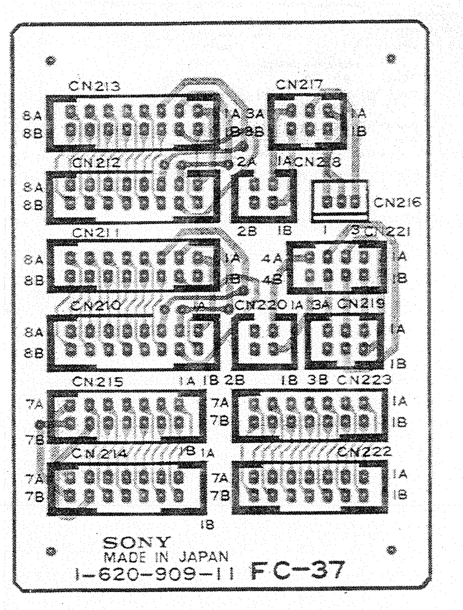
Component Side



1-620-913-11 SOLDER SIDE

FC-37 BOARD (1-620-909-11)

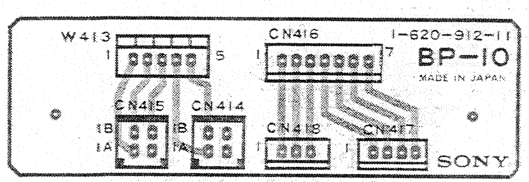
Component Side


CN213
CN217
CN212
CN218
CN216
CN211
CN221
CN210
CN220
CN219
CN215
CN223
CN214
CN222
SONY
MADE IN JAPAN
1-620-909-11 FC-37

1-620-909-11 COMPONENT SIDE
1-620-909-11 SOLDER SIDE

BP-10 BOARD (1-620-912-11)

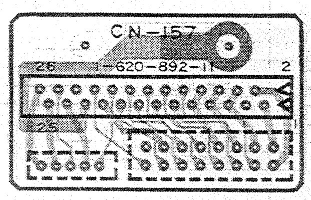
Component Side


W413
1
5
CN416
1
7
1-620-912-11
BP-10
MADE IN JAPAN
CN415
CN414
1B
1A
CN418
CN417
SONY

1-620-912-11 COMPONENT SIDE
1-620-912-11 SOLDER SIDE

CN-157 BOARD (1-620-892-11)

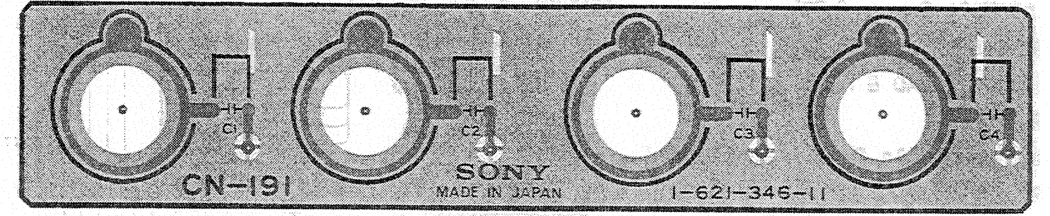
Component Side


CN-157
1-620-892-11
26
2
25

1-620-892-11 COMPONENT SIDE
1-620-892-11 SOLDER SIDE

CN-191 BOARD (1-621-346-11)

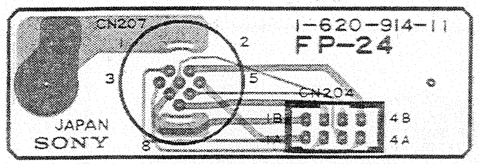
Component Side


C1
C2
C3
C4
CN-191
SONY
MADE IN JAPAN
1-621-346-11

1-621-346-11 COMPONENT SIDE
1-621-346-11 SOLDER SIDE

FP-24 BOARD (1-620-914-11)

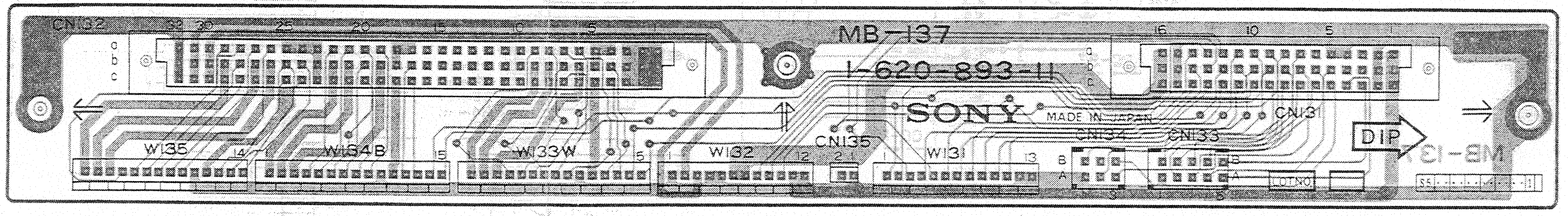
Component Side


CN207
1-620-914-11
FP-24
2
3
5
8
CN204
1B
4B
4A
JAPAN
SONY

1-620-914-11 COMPONENT SIDE
1-620-914-11 SOLDER SIDE

MB-137 BOARD (1-620-893-11)

Component Side

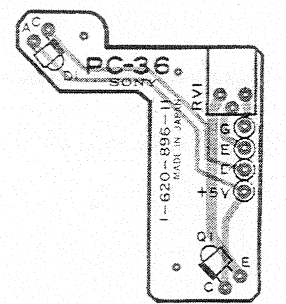

CN132
32
30
25
20
15
10
5
a
b
c
MB-137
1-620-893-11
SONY
MADE IN JAPAN
16
10
5
CN131
CN135
CN134
CN133
DIP
W135
14
W134B
W133W
W132
12
W131
13
B
A

1-620-893-11 COMPONENT SIDE

1-620-893-11 SOLDER SIDE

PC-36 BOARD (1-620-896-11)

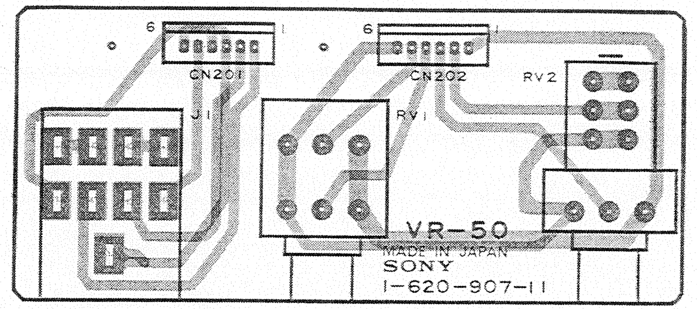
Component Side


A
C
D1
PC-36
SONY
RV1
1-620-896-11
MADE IN JAPAN
G
+5V
Q1
E
C

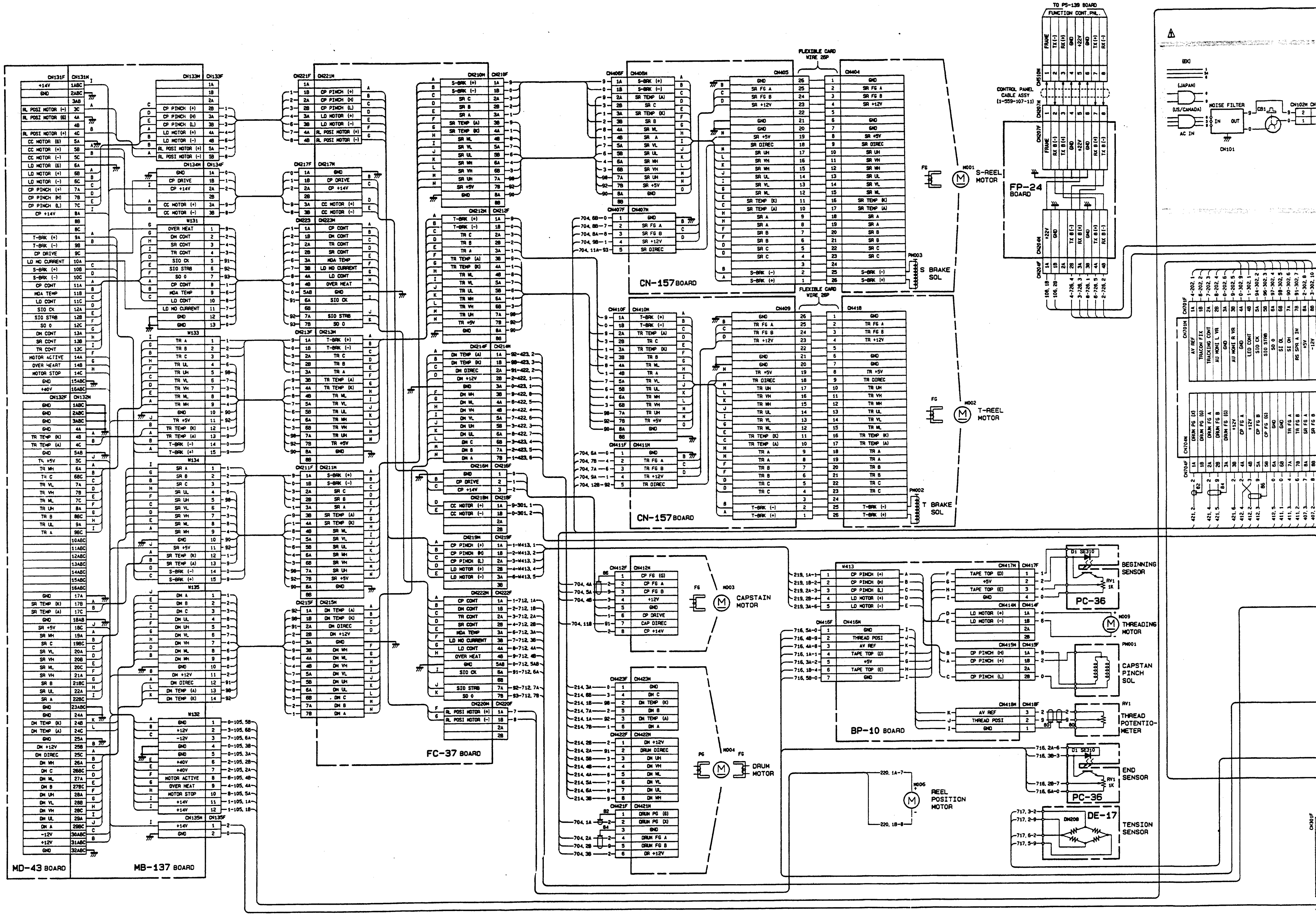
1-620-896-11 COMPONENT SIDE
1-620-896-11 SOLDER SIDE

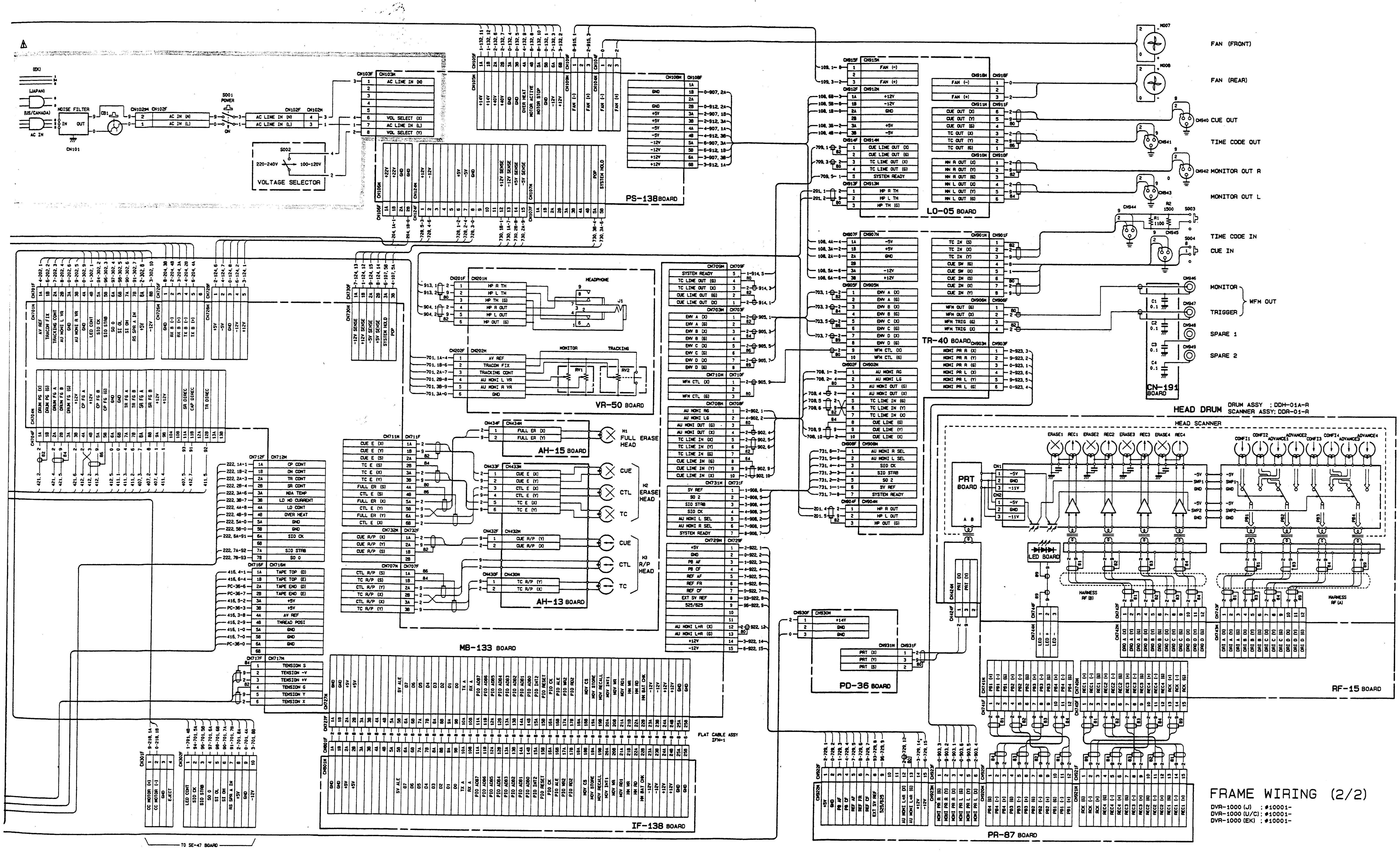
VR-50 BOARD (1-620-907-11)

Component Side


6
1
CN201
6
1
CN202
RV2
J1
RV1
VR-50
MADE IN JAPAN
SONY
1-620-907-11

1-620-907-11 COMPONENT SIDE
1-620-907-11 SOLDER SIDE


MD-43 BOARD
MB-137 BOARD
FC-37 BOARD
CN-157 BOARD
CN-157 BOARD
BP-10 BOARD
FP-24 BOARD
PC-36
PC-36
DE-17
FLEXIBLE CARD WIRE 26P
FLEXIBLE CARD WIRE 26P
TO PS-139 BOARD FUNCTION CONT.PNL.
CONTROL PANEL CABLE ASSY (1-559-107-11)
M001 S-REEL MOTOR
M002 T-REEL MOTOR
PM003 S BRAKE SOL
PM002 T BRAKE SOL
M003 CAPSTAIN MOTOR
M004 DRUM MOTOR
M006 REEL POSITION MOTOR
BEGINNING SENSOR
M009 THREADING MOTOR
PM001 CAPSTAN PINCH SOL
RV1 THREAD POTENTIO-METER
END SENSOR
TENSION SENSOR
NOISE FILTER
AC IN
(JAPAN)
(US/CANADA)
CN101


AC IN
NOISE FILTER
CB1
S001 POWER
S002
220-240V
100-120V
VOLTAGE SELECTOR
CN101
PS-138 BOARD
LO-05 BOARD
TR-40 BOARD
CN-191 BOARD
FAN (FRONT)
FAN (REAR)
CUE OUT
TIME CODE OUT
MONITOR OUT R
MONITOR OUT L
TIME CODE IN
CUE IN
MONITOR
TRIGGER
WFM OUT
SPARE 1
SPARE 2
HEADPHONE
VR-50 BOARD
MONITOR
TRACKING
AH-15 BOARD
FULL ERASE HEAD
CUE
CTL
TC
ERASE HEAD
R/P HEAD
AH-13 BOARD
MB-133 BOARD
PD-36 BOARD
HEAD DRUM
DRUM ASSY : DDH-01A-R
SCANNER ASSY: DDR-01-R
HEAD SCANNER
PRT BOARD
LED BOARD
HARNESS RF (B)
HARNESS RF (A)
RF-15 BOARD
FLAT CABLE ASSY IFM-1
IF-138 BOARD
PR-87 BOARD
TO SE-47 BOARD

FRAME WIRING (2/2)

DVR-1000 (J) ; #10001-
DVR-1000 (U/C); #10001-
DVR-1000 (EK) ; #10001-

SECTION C
SEMICONDUCTOR PIN ASSIGNMENTS

この章の図の中には互換性のないダイオード，トランジスタ，ICが併記されていることがあります。部品を交換するときには必ず部品表を参照して下さい。

等価回路はICメーカーのData Bookに従いました。

The chart in this section may sometimes show diodes, transistors, and ICs that are not interchangeable. When replacing a component, be sure to refer to the parts list.

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

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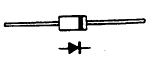
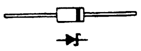


10E-2
1S1555
1S2076
1S2473
1SS119
1SS120
1SS133
1SS148
ERA84-009
ERB12- ? ?
ERB44- ? ?
ERB84-009
GP08 ?
S5277B
SIB01-02



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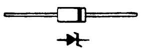
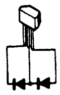
1SS198
1SS97
ERA81-004
ERC84-009



1SZ ? ?
EQA02
HZ ? ?EB ?
RD ? ?EB ?



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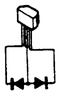

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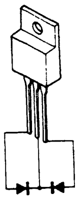
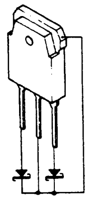


ESAB85-009
ESAC25-02C
ESAC85-009
ESAC92-02
S5KC20



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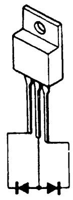

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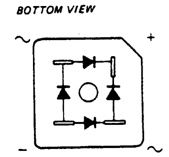
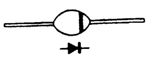
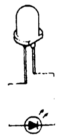

BOTTOM VIEW
~
+
−
~

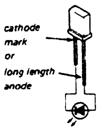
S15VB ? ?



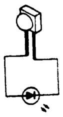
DSA1A ?
DSA1C ?
U05E
V06C
V11 ?



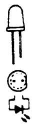
EAA5504S ; AMBER
EBG5504S ; GREEN
EBR5504S ; RED


cathode
mark
or
long length
anode

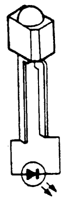
GL-9PG2 ; GREEN



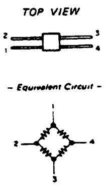
LN25RP ; RED
LN35BP ; GREEN



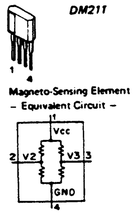
PY5525S ; YELLOW



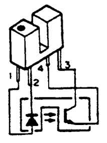
SE310 ; INFRARED


TOP VIEW
2
1
3
4
- Equivalent Circuit -
1
2
4
3

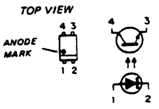
DM208


1
4
Magneto-Sensing Element
- Equivalent Circuit -
1
Vcc
2
V2
V3
3
GND
4

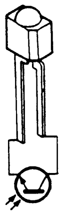
DM211



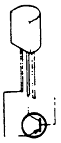
GP-1S04
GP-1S05


TOP VIEW
ANODE
MARK
4 3
1 2
4
3
1
2

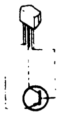
PC817



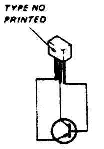
PH110



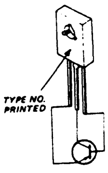
2SA1020
2SA773
2SA966
2SB739
2SB740



2SA1048
2SA1115
2SA933S


TYPE NO.
PRINTED

2SA1175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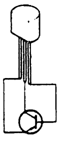
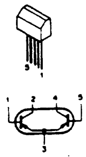
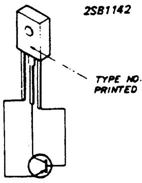
2SA1220A
2SA715



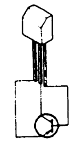
2SA733
2SA844
2SA872
2SA872A
2SB1013



2SA979

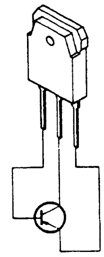

TYPE NO.
PRINTED

2SB1142

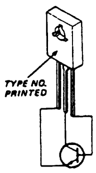


2SB733
2SB734

TRANSISTOR



2SB757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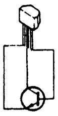
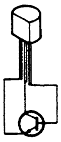
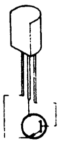
2SC1162
2SC2690A



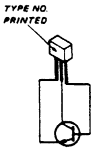
2SC1740S
2SC2458
2SC2603



2SC1775
2SC1775A
2SC2120
2SC2240
2SC2878
2SC945



2SC2001
2SC2655
2SD789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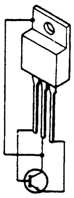
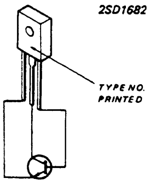
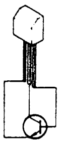
2SC2785



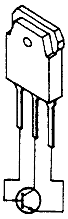
2SD1118


TYPE NO.
PRINTED

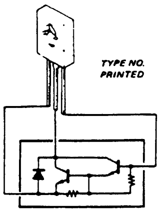
2SD1682



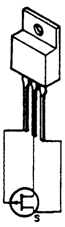
2SD774



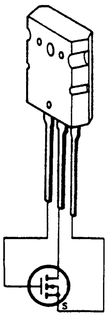
2SD847


TYPE NO.
PRINTED

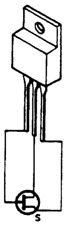
2SD998



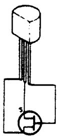
2SJ122



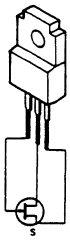
2SK385



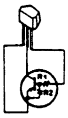
2SK428



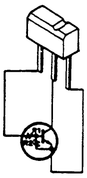
2SK523



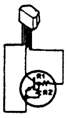
2SK528



DTA124ES (R1=22K, R2=22K)
DTA144ES (R1=47K, R2=47K)

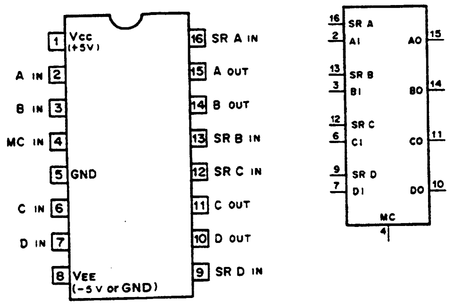


DTC114EF (R1=10K, R2=10K)
DTC124EF (R1=22K, R2=22K)
DTC144EF (R1=47K, R2=47K)

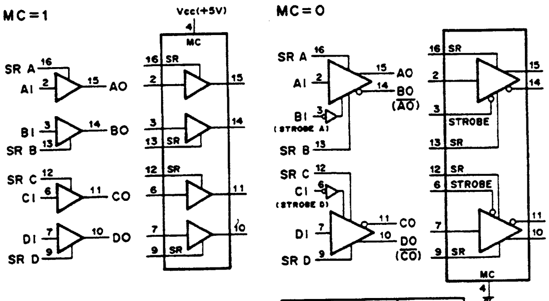


DTC114ES (R1=10K, R2=10K)
DTC114YS (R1=10K, R2=47K)
DTC124ES (R1=22K, R2=22K)
DTC144WS (R1=47K, R2=22K)

AM26LS30PC (ADVANCED MICRO DEVICES)
LINE DRIVER
— TOP VIEW —


1 Vcc (+5V)
A IN 2
B IN 3
MC IN 4
5 GND
C IN 6
D IN 7
8 VEE (-5V or GND)
16 SR A IN
15 A OUT
14 B OUT
13 SR B IN
12 SR C IN
11 C OUT
10 D OUT
9 SR D IN
SR A
AI
AO
SR B
BI
BO
SR C
CI
CO
SR D
DI
DO
MC

MC : MODE CONTROL
SR : SLEW RATE CONTROL

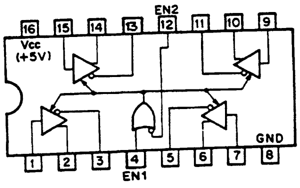

MC=1
Vcc(+5V)
SR A
AI
AO
BI
BO
SR B
SR C
CI
CO
DI
DO
SR D
MC=0
SR A
AI
AO
BO
(AO)
BI
(STROBE A)
STROBE
SR B
SR C
CI
(STROBE D)
CO
DO
(CO)
DI
SR D
SR
MC

INPUTS		OUTPUTS
MC	A TO D	A TO D
1	0	0
1	1	1

INPUTS			OUTPUTS	
MC	STROBE	A & D	A & D	B & C
0	0	0	0	1
0	0	1	1	0
0	1	X	HI-Z	HI-Z

0; LOW LEVEL
1: HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

AM26LS31CN (TI)
AM26LS31PC (ADVANCED MICRO DEVICE)
HIGH SPEED DIFFERENTIAL LINE DRIVER
— TOP VIEW —

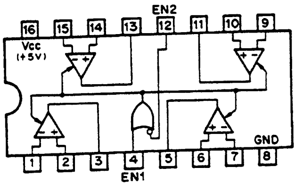

EN2
16
15
14
13
12
11
10
9
Vcc (+5V)
GND
1
2
3
4
5
6
7
8
EN1

FUNCTION TABLE

EN2	EN1	OUTPUT
0	0	ENABLE
0	1	ENABLE
1	0	HI-Z
1	1	ENABLE

0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE

AM26LS32ACN (TI)
AM26LS32PC (ADVANCED MICRO DEVICES)
AM26LS33PC (ADVANCED MICRO DEVICES)
HIGH SPEED DIFFERENTIAL LINE RECEIVER
— TOP VIEW —


EN2
16
15
14
13
12
11
10
9
Vcc (+5V)
GND
1
2
3
4
5
6
7
8
EN1

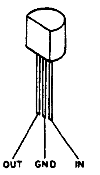
FUNCTION TABLE

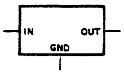
EN2	EN1	OUTPUT
0	0	ENABLE
0	1	ENABLE
1	0	HI-Z
1	1	ENABLE

0; LOW LEVEL
1; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE

	SENSE	INPUT VOLT
LS32	±200mV	±7V
LS33	±500mV	±15V

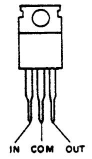
AN78L ? ? (MATSUSHITA)
NJM78L ? ?A (NEC)
uA78L ? ?ACL (TI)
uA78L ? ?AWV (FSC)
uPC78L ? ?J(NEC)
POSITIVE VOLTAGE REGULATOR (100mA)

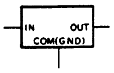




OUTPUT VOLTAGE	NJM78L??A	uA78L??ACL	uA78L??AWV	uPC78L??J	AN78L??
+2.6V	NJM78L02A	uA78L02ACL	uA78L26AWV	---------	-------
+4V	---------	----------	----------	---------	AN78L04
+5V	NJM78L05A	uA78L05ACL	uA78L05AWV	uPC78L05J	AN78L05
+6V	NJM78L06A	----------	----------	---------	AN78L06
+6.2V	---------	uA78L06ACL	uA78L62AWV	---------	-------
+7V	---------	----------	----------	---------	AN78L07
+8V	NJM78L08A	uA78L08ACL	----------	uPC78L08J	AN78L08
+8.2V	---------	----------	uA78L82AWV	---------	-------
+9V	NJM78L09A	uA78L09ACL	uA78L09AWV	---------	AN78L09
+10V	---------	uA78L10ACL	----------	uPC78L10J	AN78L10
+12V	NJM78L12A	uA78L12ACL	uA78L12AWV	uPC78L12J	AN78L12
+15V	NJM78L15A	uA78L15ACL	uA78L15AWV	uPC78L15J	AN78L15
+18V	NJM78L18A	----------	uA78L18AWV	---------	AN78L18
+20V	NJM78L20A	----------	----------	---------	AN78L20
+24V	NJM78L24A	----------	uA78L24AWV	---------	AN78L24

AN78M ? ? (MATSUSHITA)
FS78 ? ?M (SANKEN)
HA178M ? ?P (HITACHI)
L78M ? ? (SANYO)
uA78M ? ?UC (FSC)
uPC78M ? ?H (NEC)
POSITIVE VOLTAGE REGULATOR (0.5A)
— SIDE VIEW —

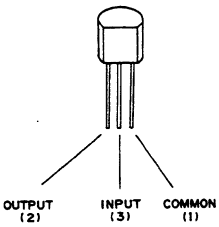


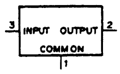

IN
OUT
COM(GND)

OUTPUT VOLTAGE	uA78M??UC	FS78??M	uPC78M??H	L78M??	HA178M??P
+5V	uA78M05UC	FS7805M	uPC78M05H	L78M05	HA178M05P
+6V	uA78M06UC	-------	---------	------	HA178M06P
+7V	---------	-------	---------	------	HA178M07P
+8V	uA78M08UC	-------	uPC78M08H	------	HA178M08P
+12V	uA78M12UC	FS7812M	uPC78M12H	------	HA178M12P
+15V	uA78M15UC	FS7815M	uPC78M15H	------	HA178M15P
+18V	---------	-------	---------	------	HA178M18P
+20V	uA78M20UC	-------	---------	------	HA178M20P
+24V	uA78M24UC	FS7824M	uPC78M24H	------	HA178M24P

OUTPUT VOLTAGE	AN78M??
+5V	AN78M05
+6V	AN78M06
+7V	AN78M07
+8V	AN78M08
+9V	AN78M09
+10V	AN78M10
+12V	AN78M12
+15V	AN78M15
+18V	AN78M18
+20V	AN78M20
+24V	AN78M24

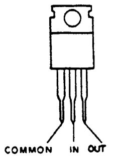
AN79L ? ? (MATSUSHITA)
NEGATIVE VOLTAGE REGULATOR (100mA)
— FRONT VIEW —

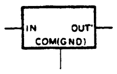

OUTPUT (2)
INPUT (3)
COMMON (1)


3
INPUT
OUTPUT
2
COMMON
1

OUTPUT VOLTAGE	??
- 4V	04
- 5V	05
- 6V	06
- 7V	07
- 8V	08
- 9V	09
-10V	10
-12V	12
-15V	15
-18V	18
-20V	20
-24V	24

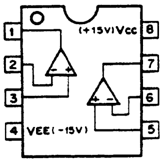
AN79M ? ? (MATSUSHITA)
FS79 ? ?M (SANKEN)
uA79M ? ?AUC (FSC)
uPC79M ? ?H (NEC)
NEGATIVE VOLTAGE REGULATOR (0.5A)
— SIDE VIEW —


COMMON
IN
OUT

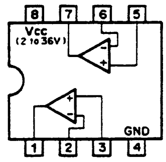

IN
OUT
COM(GND)

OUTPUT VOLTAGE	uA79M??AUC	FS79??M	AN79M??	uPC79M??H
-5V	uA79M05AUC	FS7905M	AN79M05	uPC79M05H
-6V	uA79M06AUC	-------	AN79M06	---------
-7V	----------	-------	AN79M07	---------
-8V	uA79M08AUC	-------	AN79M08	uPC79M08H
-9V	----------	-------	AN79M09	---------
-10V	----------	-------	AN79M10	---------
-12V	uA79M12AUC	FS7912M	AN79M12	uPC79M12H
-15V	uA79M15AUC	FS7915M	AN79M15	uPC79M15H
-18V	----------	-------	AN79M18	uPC79M18H
-20V	uA79M20AUC	-------	AN79M20	---------
-24V	uA79M24AUC	FS7924M	AN79M24	uPC79M24H

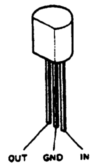
BA4558 (ROHM)
BA4558F (ROHM) FLAT PACKAGE
HA17558 (HITACHI)
M5218P (MITSUBISHI)
NJM4558D (JRC)
NJM4558D-D (JRC)
NJM4558D-FA (JRC)
NJM4558D-MD (JRC)
NJM4558M (JRC) FLAT PACKAGE
RC4558 (RAYTHEON)
uPC4558C (NEC)
uPC4558G (NEC) FLAT PACKAGE
uPC4558G2 (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

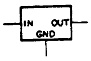

1
2
3
4
(+15V)Vcc
8
7
6
5
VEE(-15V)

BA6993 (ROHM)
IR9393 (SHARP)
NJM2903D (JRC)
NJM2903M (JRC) FLAT PACKAGE
uA393DC (FSC)
uPC393C (NEC)
uPC393G (NEC) FLAT PACKAGE
uPC393G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —

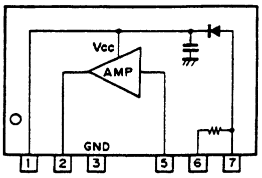

8
7
6
5
Vcc
(2 to 36V)
GND
1
2
3
4

BA707 (ROHM)
+3.3V VOLTAGE REGULATOR

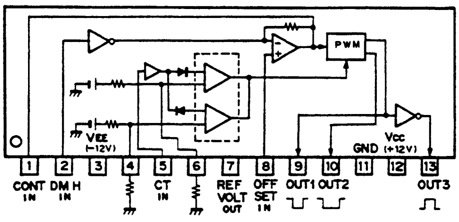




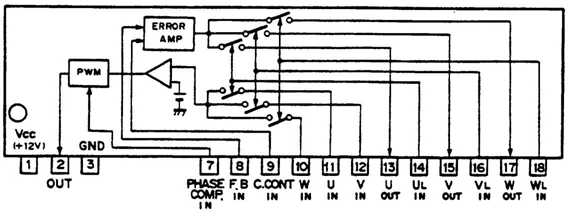
BX1281 (SONY)
POWER MOS FET DRIVER
— PRINTED SIDE VIEW —


Vcc
AMP
GND
1
2
3
5
6
7

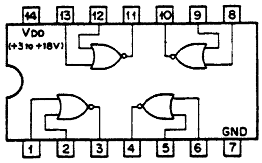
BX1320 (SONY)
DRUM AND CAPSTAN MOTOR DRIVE CONTROLLER
— PRINTED SIDE VIEW —

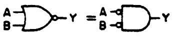

PWM
VEE
(-12V)
GND
Vcc
(+12V)
1
2
3
4
5
6
7
8
9
10
11
12
13
CONT IN
DM H IN
CT IN
REF VOLT OUT
OFF SET IN
OUT1
OUT2
OUT3

BX1321 (SONY)
REEL MOTOR DRIVE CONTROLLER
— PRINTED SIDE VIEW —


ERROR AMP
PWM
Vcc
(+12V)
GND
1
2
3
OUT
7
8
9
10
11
12
13
14
15
16
17
18
PHASE COMP. IN
F.B IN
C.CONT IN
W IN
U IN
V IN
U OUT
UL IN
V OUT
VL IN
W OUT
WL IN

CD4001AE/BE (RCA)
CD4001UBE (RCA)
HD14001BP (HITACHI)
MB84001B (FUJITSU)
MC14001BCP (MOTOROLA)
MC14001UBCP (MOTOROLA)
MSM4001 (OKI)
MSM4001BRS (OKI)
TC4001BF (TOSHIBA) FLAT PACKAGE
TC4001BP (TOSHIBA)
TC4001UBP (TOSHIBA)
uPD4001BC (NEC)
C-MOS 2-INPUT NOR GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+3 to +18V)
GND
1
2
3
4
5
6
7

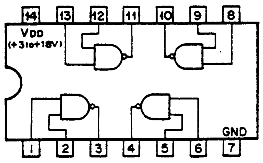


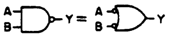
$Y = \overline{A+B} = \overline{A} \cdot \overline{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

CD4011AE/BE (RCA)
CD4011UBE (RCA)
HD14011BP (HITACHI)
MB84011B (FUJITSU)
MC14011BCP (MOTOROLA)
MC14011UBCP (MOTOROLA)
MSM4011BRS (OKI)
MSM4011RS (OKI)
TC4011BF (TOSHIBA) FLAT PACKAGE
TC4011BP (TOSHIBA)
TC4011UBP (TOSHIBA)
uPD4011BC (NEC)
C-MOS 2-INPUT NAND GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+3 to +18V)
GND
1
2
3
4
5
6
7

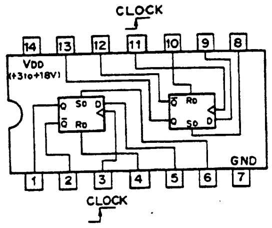


$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0:LOW LEVEL
1:HIGH LEVEL

CD4013AE/BE (RCA)
HD14013BFP (HITACHI) FLAT PACKAGE
HD14013BP (HITACHI)
MB84013B (FUJITSU)
MB84013M (FUJITSU)
MC14013BCP (MOTOROLA)
uPD4013BC (NEC)
uPD4013BG (NEC)
uPD4013C (NEC)
C-MOS D-TYPE FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —


CLOCK
14
13
12
11
10
9
8
VDD
(+3to+18V)
Q
SD
D
$\overline{Q}$
RD
$\overline{Q}$
RD
Q
SD
D
GND
1
2
3
4
5
6
7
CLOCK

DIRECT R-S FLIP FLOP

SD	RD	Q	$\overline{Q}$
0	0	Qn	$\overline{Qn}$
0	1	0	1
1	0	1	0
1	1	1	1

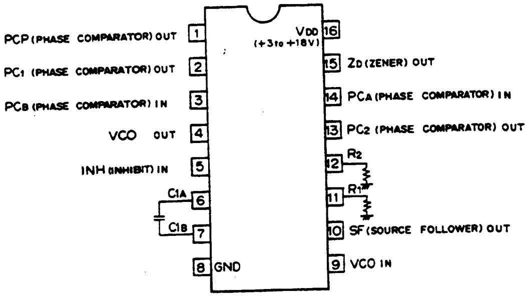
D-TYPE FLIP FLOP

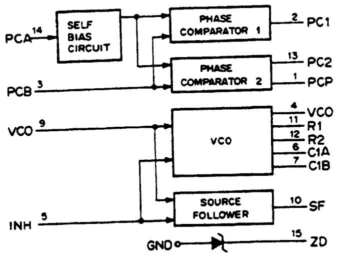
CKn	CKn+1
D	Q
0	0
1	1

0: LOW LEVEL
1: HIGH LEVEL

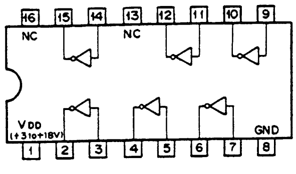
CLOCK CK; ⌐
CKn; BEFORE CLOCK
CKn+1; AFTER CLOCK

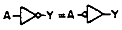
CD4046BE (RCA)
HD14046BP (HITACHI)
MC14046BCP (MOTOROLA)
TC4046BP (TOSHIBA)
C-MOS PHASE LOCKED LOOP
— TOP VIEW —


PCP (PHASE COMPARATOR) OUT 1
PC1 (PHASE COMPARATOR) OUT 2
PCB (PHASE COMPARATOR) IN 3
VCO OUT 4
INH (INHIBIT) IN 5
C1A 6
C1B 7
8 GND
VDD (+3to+18V) 16
15 ZD (ZENER) OUT
14 PCA (PHASE COMPARATOR) IN
13 PC2 (PHASE COMPARATOR) OUT
12 R2
11 R1
10 SF (SOURCE FOLLOWER) OUT
9 VCO IN


PCA 14
SELF BIAS CIRCUIT
PHASE COMPARATOR 1
2 PC1
PHASE COMPARATOR 2
13 PC2
1 PCP
PCB 3
VCO 9
VCO
4 VCO
11 R1
12 R2
6 C1A
7 C1B
SOURCE FOLLOWER
10 SF
INH 5
GND
15 ZD

CD4049AE (RCA)
CD4049UBE (RCA)
HD14049UBP (HITACHI)
M4049BP (MITSUBISHI)
MB84049B (FUJITSU)
MB84049UB (FUJITSU)
MC14049UBCP (MOTOROLA)
MSM4049BRS (OKI)
TC4049BF (TOSHIBA) FLAT PACKAGE
TC4049BP (TOSHIBA)
uPD4049C (NEC)
uPD4049UBC (NEC)
C-MOS INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —


16
15
14
13
12
11
10
9
NC
NC
VDD
(+3to+18V)
GND
1
2
3
4
5
6
7
8

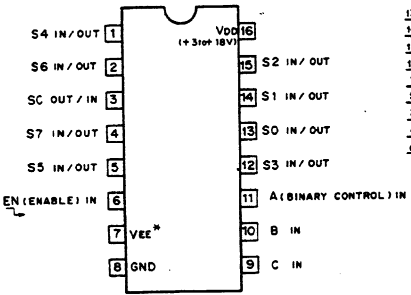


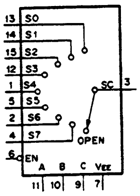
$Y = \overline{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

CD4051BE (RCA)
F4051BPC (FSC)
HD14051BP (HITACHI)
MB84051B (FUJITSU)
MC14051BCP (MOTOROLA)
MSM4051BRS (OKI)
TC4051BF (TOSHIBA) FLAT PACKAGE
TC4051BP (TOSHIBA)
TP4051B (TI)
uPD4051BC (NEC)
C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —


S4 IN/OUT 1
S6 IN/OUT 2
SC OUT/IN 3
S7 IN/OUT 4
S5 IN/OUT 5
EN (ENABLE) IN 6
7 VEE*
8 GND
VDD (+3to+18V) 16
15 S2 IN/OUT
14 S1 IN/OUT
13 S0 IN/OUT
12 S3 IN/OUT
11 A (BINARY CONTROL) IN
10 B IN
9 C IN

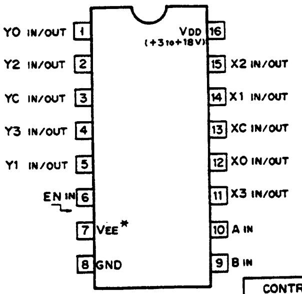

13 S0
14 S1
15 S2
12 S3
1 S4
5 S5
2 S6
4 S7
SC 3
OPEN
6 EN
A
B
C
VEE
11
10
9
7

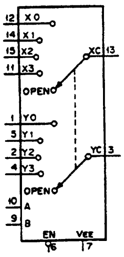
VEE*; VDD−VEE: +3to+18V

EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

CD4052BE (RCA)
HD14052BP (HITACHI)
MB84052B (FUJITSU)
MC14052BCP (MOTOROLA)
MSM4052BRS (OKI)
TC4052BF (TOSHIBA) FLAT PACKAGE
TC4052BP (TOSHIBA)
uPD4052BC (NEC)
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —


Y0 IN/OUT 1
Y2 IN/OUT 2
YC IN/OUT 3
Y3 IN/OUT 4
Y1 IN/OUT 5
EN IN 6
7 VEE*
8 GND
VDD (+3to+18V) 16
15 X2 IN/OUT
14 X1 IN/OUT
13 XC IN/OUT
12 X0 IN/OUT
11 X3 IN/OUT
10 A IN
9 B IN

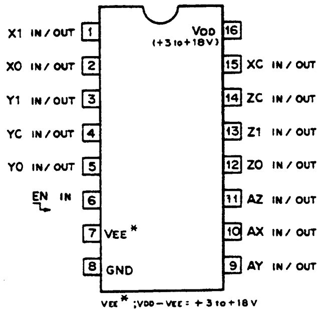

12 X0
14 X1
15 X2
11 X3
XC 13
OPEN
1 Y0
5 Y1
2 Y2
4 Y3
YC 3
OPEN
10 A
9 B
EN
VEE
16
7

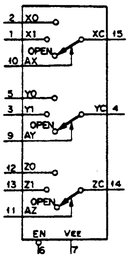
VEE*; VDD−VEE = +3 to +18V

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

CD4053BE (RCA)
HD14053BP (HITACHI)
MB84053B (FUJITSU)
MC14053BCP (MOTOROLA)
MSM4053 (OKI)
TC4053BF (TOSHIBA) FLAT PACKAGE
TC4053BFHB (TOSHIBA)
TC4053BP (TOSHIBA)
uPD4053BC (NEC)
uPD4053BG (NEC) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

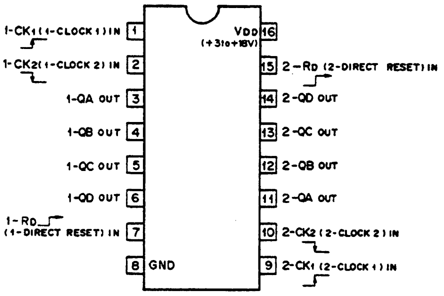

X1 IN/OUT 1
X0 IN/OUT 2
Y1 IN/OUT 3
YC IN/OUT 4
Y0 IN/OUT 5
EN IN 6
7 VEE*
8 GND
16 VDD (+3 to +18V)
15 XC IN/OUT
14 ZC IN/OUT
13 Z1 IN/OUT
12 Z0 IN/OUT
11 AZ IN/OUT
10 AX IN/OUT
9 AY IN/OUT
VEE* ; VDD−VEE: +3 to +18 V


2 X0
1 X1
XC 15
OPEN
10 AX
5 Y0
3 Y1
YC 4
OPEN
9 AY
12 Z0
13 Z1
ZC 14
OPEN
11 AZ
EN 6
VEE 7

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

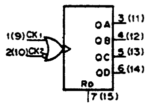
CONT. INPUTS		ON CHANNEL
EN	A (X,Y,Z)	
0	0	0
0	1	1
1	X	OPEN

CD4520BE (RCA)
HD14520BP (HITACHI)
MB84520B (FUJITSU)
MC14520BCP (MOTOROLA)
MSM4520BRS (OKI)
MSM4520RS (OKI)
TC4520BF (TOSHIBA) FLAT PACKAGE
TC4520BP (TOSHIBA)
uPD4520BC (NEC)
C-MOS DUAL 4-BIT BINARY UP COUNTER
— TOP VIEW —


1-CK1 (1-CLOCK 1) IN 1
1-CK2 (1-CLOCK 2) IN 2
1-QA OUT 3
1-QB OUT 4
1-QC OUT 5
1-QD OUT 6
1-RD (1-DIRECT RESET) IN 7
8 GND
16 VDD (+3 to +18V)
15 2-RD (2-DIRECT RESET) IN
14 2-QD OUT
13 2-QC OUT
12 2-QB OUT
11 2-QA OUT
10 2-CK2 (2-CLOCK 2) IN
9 2-CK1 (2-CLOCK 1) IN

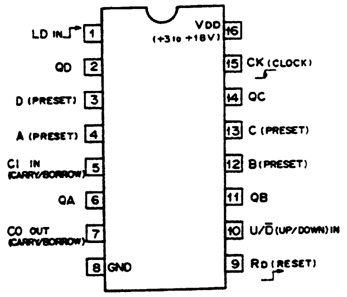
STATE	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

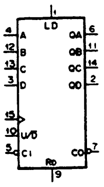
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE


1(9) CK1
2(10) CK2
QA 3 (11)
QB 4 (12)
QC 5 (13)
QD 6 (14)
RD
7 (15)

CK1	CK2	RD	ACTION
↑	1	0	INCREMENT COUNTER
0	↓	0	INCREMENT COUNTER
↓	X	0	NO CHANGE
X	↑	0	NO CHANGE
↑	0	0	NO CHANGE
1	↓	0	NO CHANGE
X	X	1	QA THRU QD = 0

CD4516BE (RCA)
HD14516BP (HITACHI)
MC14516BCP (MOTOROLA)
TC4516BF (TOSHIBA) FLAT PACKAGE
TC4516BP (TOSHIBA)
uPD4516BC (NEC)
C-MOS PRESETTABLE BINARY UP/DOWN COUNTER
— TOP VIEW —


LD IN 1
QD 2
D (PRESET) 3
A (PRESET) 4
CI IN (CARRY/BORROW) 5
QA 6
CO OUT (CARRY/BORROW) 7
8 GND
16 VDD (+3 to +18V)
15 CK (CLOCK)
14 QC
13 C (PRESET)
12 B (PRESET)
11 QB
10 U/D̄ (UP/DOWN) IN
9 RD (RESET)


1
LD
4 A
12 B
13 C
3 D
15
10 U/D̄
5 CI
QA 6
QB 11
QC 14
QD 2
CO 7
RD
9

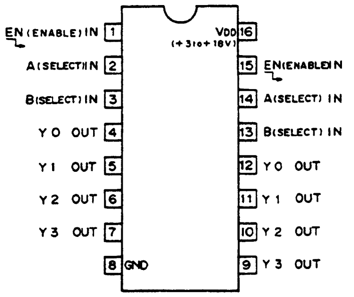
INPUTS					OUTPUTS			
CK	RD	LD	CI	U/D̄	QD	QC	QB	QA
X	1	X	X	X	0	0	0	0
X	0	1	X	X	SET TO A,B,C,D			
↑	0	0	0	1	COUNT UP			
↑	0	0	0	0	COUNT DOWN			
0	0	0	X	X	NO CHANGE			
X	0	0	1	X	NO CHANGE			

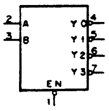
CO = L
CI = L & (DOWN · COUNT "0" OR UP · COUNT "15")

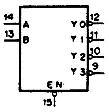
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

COUNT UP ↓
COUNT DOWN ↑

CD4556BE (RCA)
HD14556BP (HITACHI)
MC14556BCP (MOTOROLA)
TC4556BF (TOSHIBA) FLAT PACKAGE
TC4556BP (TOSHIBA)
uPD4556BC (NEC)
C-MOS BINARY TO 1-OF-4 DECODER/DEMULTIPLEXER
— TOP VIEW —


EN (ENABLE) IN 1
A (SELECT) IN 2
B (SELECT) IN 3
Y0 OUT 4
Y1 OUT 5
Y2 OUT 6
Y3 OUT 7
8 GND
16 VDD (+3 to +18V)
15 EN (ENABLE) IN
14 A (SELECT) IN
13 B (SELECT) IN
12 Y0 OUT
11 Y1 OUT
10 Y2 OUT
9 Y3 OUT

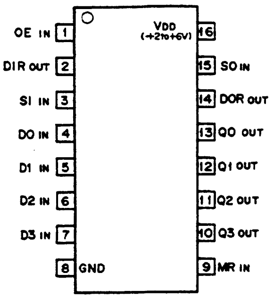

2 A
3 B
Y0 4
Y1 5
Y2 6
Y3 7
EN
1

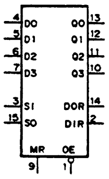

14 A
13 B
Y0 12
Y1 11
Y2 10
Y3 9
EN
15

INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

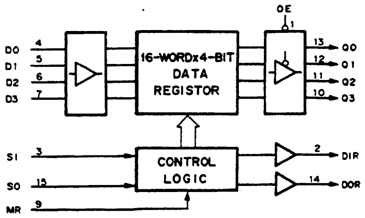
X ; DON'T CARE
1 ; HIGH LEVEL
0 ; LOW LEVEL

CD74HC40105E (RCA)
C-MOS 16-WORDx4-BIT FIFO REGISTER
— TOP VIEW —

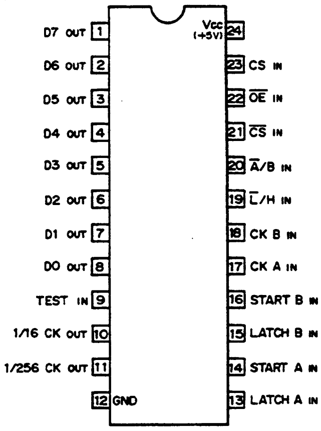

OE IN 1
DIR OUT 2
SI IN 3
D0 IN 4
D1 IN 5
D2 IN 6
D3 IN 7
8 GND
VDD (+2to+6V) 16
15 SO IN
14 DOR OUT
13 Q0 OUT
12 Q1 OUT
11 Q2 OUT
10 Q3 OUT
9 MR IN

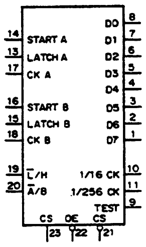

4 D0
5 D1
6 D2
7 D3
3 SI
15 SO
Q0 13
Q1 12
Q2 11
Q3 10
DOR 14
DIR 2
MR 9
OE 1

OE ; OUTPUT ENABLE INPUT
D0–D3 ; DATA INPUTS
Q0–Q3 ; DATA OUTPUTS
SI ; SHIFT IN INPUT
SO ; SHIFT OUT INPUT
MR ; MASTER RESET INPUT
DIR ; DATA IN READY OUTPUT
DOR ; DATA OUT READY OUTPUT


D0 4
D1 5
D2 6
D3 7
16-WORDx4-BIT DATA REGISTOR
OE 1
13 Q0
12 Q1
11 Q2
10 Q3
SI 3
SO 15
MR 9
CONTROL LOGIC
2 DIR
14 DOR

CF77074NT (TI)
CLOCK COUNTER
— TOP VIEW —


D7 OUT 1
D6 OUT 2
D5 OUT 3
D4 OUT 4
D3 OUT 5
D2 OUT 6
D1 OUT 7
D0 OUT 8
TEST IN 9
1/16 CK OUT 10
1/256 CK OUT 11
12 GND
Vcc (+5V) 24
23 CS IN
22 OE IN
21 CS IN
20 A/B IN
19 L/H IN
18 CK B IN
17 CK A IN
16 START B IN
15 LATCH B IN
14 START A IN
13 LATCH A IN

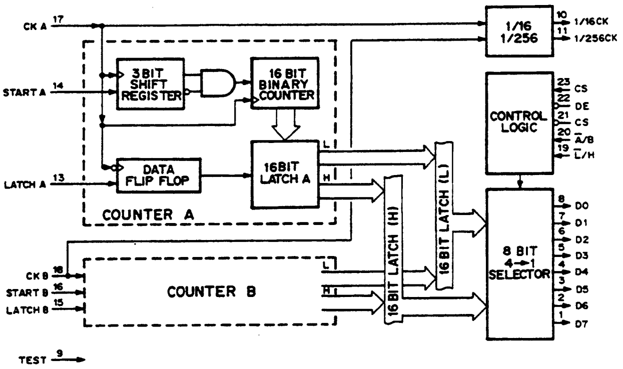

14 START A
13 LATCH A
17 CK A
16 START B
15 LATCH B
18 CK B
19 L/H
20 A/B
D0 8
D1 7
D2 6
D3 5
D4 4
D5 3
D6 2
D7 1
1/16 CK 10
1/256 CK 11
TEST 9
CS 23
OE 22
CS 21

$\overline{A}$/B ; DATA LATCH A/B SELECT INPUT
CKA,CKB; CLOCK INPUT
(⎍ → COUNT UP
⎍ → LATCH)
CS ; CHIP SELECT INPUT
D0-D7 ; DATA OUTPUT
$\overline{L}$/H ; DATA LATCH LOW/HIGH SELECT INPUT
OE ; OUTPUT ENABLE INPUT

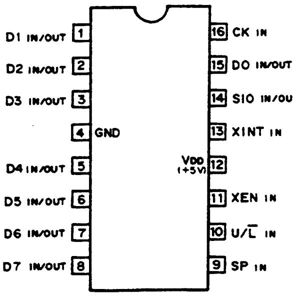
MODE SELECT

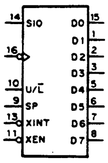
INPUT					OUTPUT
CS	$\overline{CS}$	$\overline{OE}$	$\overline{A}$/B	$\overline{L}$/H	D0–D7
0	X	X	X	X	HI–Z
1	0	0	0	0	LATCH A LOW BYTE
1	0	0	0	1	LATCH A HIGH BYTE
1	0	0	1	0	LATCH B LOW BYTE
1	0	0	1	1	LATCH B HIGH BYTE
X	1	X	X	X	HI–Z
X	X	1	X	X	

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

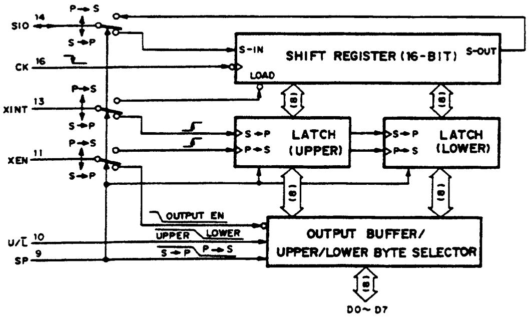

CK A 17
START A 14
LATCH A 13
3BIT SHIFT REGISTER
16 BIT BINARY COUNTER
DATA FLIP FLOP
16BIT LATCH A
L
H
COUNTER A
CK B 18
START B 16
LATCH B 15
COUNTER B
TEST 9
16BIT LATCH (H)
16BIT LATCH (L)
1/16 1/256
10 1/16CK
11 1/256CK
CONTROL LOGIC
23 CS
22 OE
21 CS
20 A/B
19 L/H
8 BIT 4→1 SELECTOR
8 D0
7 D1
6 D2
5 D3
4 D4
3 D5
2 D6
1 D7

CX23026 (SONY)
C-MOS 8-BIT SERIAL TO/FROM PARALLEL SHIFT REGISTER
— TOP VIEW —

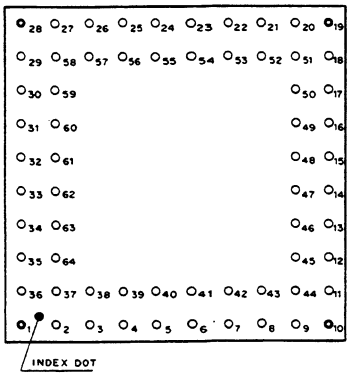

D1 IN/OUT 1
D2 IN/OUT 2
D3 IN/OUT 3
4 GND
D4 IN/OUT 5
D5 IN/OUT 6
D6 IN/OUT 7
D7 IN/OUT 8
16 CK IN
15 D0 IN/OUT
14 SIO IN/OUT
13 XINT IN
VDD (+5V) 12
11 XEN IN
10 U/L IN
9 SP IN

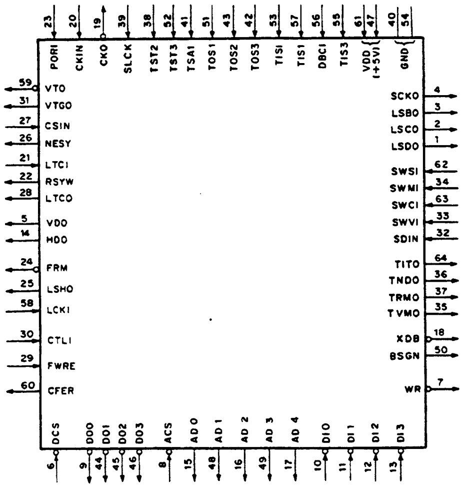

14 SIO
16
10 U/L
9 SP
13 XINT
11 XEN
D0 15
D1 1
D2 2
D3 3
D4 5
D5 6
D6 7
D7 8

D0-D7 ; PARALLEL DATA INPUTS/OUTPUTS
SIO ; SERIAL DATA INPUT/OUTPUT
U/$\overline{L}$; UPPER/$\overline{\text{LOWER}}$ BYTE SELECT INPUT
SP ; S→P/$\overline{P\to S}$ SELECT INPUT
XINT ; INITIALIZE INPUT
XEN ; READ/WRITE INPUT
CK ; CLOCK INPUT


SIO 14
P→S
S→P
CK 16
XINT 13
XEN 11
U/L 10
SP 9
S-IN
SHIFT REGISTER (16-BIT)
S-OUT
LOAD
(8)
S→P
P→S
LATCH (UPPER)
LATCH (LOWER)
OUTPUT EN
UPPER
LOWER
OUTPUT BUFFER/ UPPER/LOWER BYTE SELECTOR
D0~D7

CX7907 (SONY)
CX7907A (SONY)
C-MOS TIME CODE GENERATOR
— TOP VIEW —

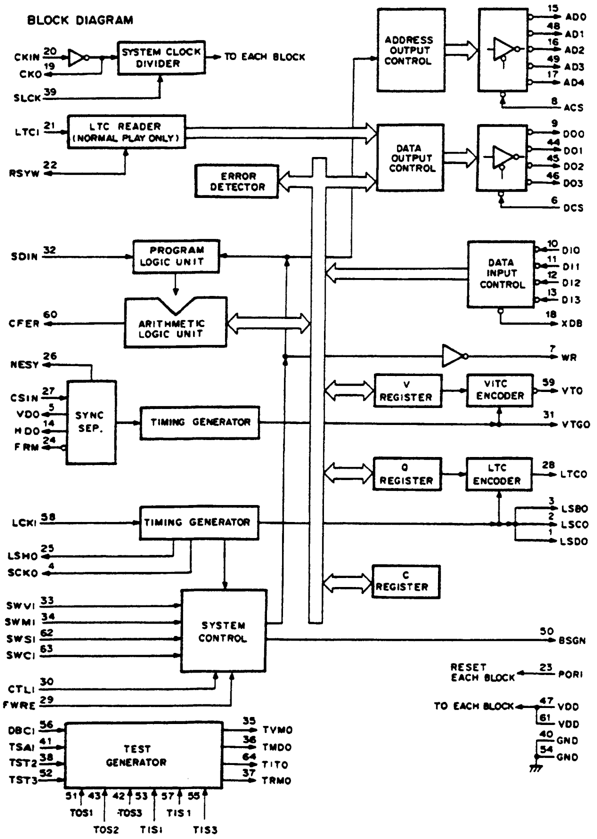

28 27 26 25 24 23 22 21 20 19
29 58 57 56 55 54 53 52 51 18
30 59 50 17
31 60 49 16
32 61 48 15
33 62 47 14
34 63 46 13
35 64 45 12
36 37 38 39 40 41 42 43 44 11
1 2 3 4 5 6 7 8 9 10
INDEX DOT


23 PORI
20 CKIN
19 CKO
39 SLCK
38 TST2
52 TST3
41 TSAI
51 TOS1
43 TOS2
42 TOS3
53 TISI
57 TIS1
56 DBCI
55 TIS3
61 47 VDD (+5V)
40 54 GND
59 VTO
31 VTGO
27 CSIN
26 NESY
21 LTCI
22 RSYW
28 LTCO
5 VDO
14 HDO
24 FRM
25 LSHO
58 LCKI
30 CTLI
29 FWRE
60 CFER
SCKO 4
LSBO 3
LSCO 2
LSDO 1
SWSI 62
SWMI 34
SWCI 63
SWVI 33
SDIN 32
TITO 64
TNDO 36
TRMO 37
TVMO 35
XDB 18
BSGN 50
WR 7
6 DCS
9 DO0
44 DO1
45 DO2
46 DO3
8 ACS
15 AD0
48 AD1
16 AD2
49 AD3
17 AD4
10 DI0
11 DI1
12 DI2
13 DI3

PIN ASSIGNMENT

Pin No.	IN	OUT	SYMBOL
1		o	LSDO
2		o	LSCO
3		o	LSBO
4		o	SCKO
5		o	VDO
6	o		DCS
7		o	WR
8	o		ACS
9		o	DO0
10	o		DI0
11	o		DI1
12	o		DI2
13	o		DI3
14		o	HDO
15		o	AD0
16		o	AD2
17		o	AD4
18		o	XDB
19		o	CKO
20	o		CKIN
21	o		LTCI
22		o	RSYW
23	o		PORI
24		o	FRM
25		o	LSHO
26		o	NESY
27	o		CSIN
28		o	LTCO
29	o		FWRE
30	o		CTLI
31		o	VTGO
32	o		SDIN
33	o		SWVI
34	o		SWMI
35		o	TVMO
36		o	TNDO
37		o	TRMO
38	o		TST2
39	o		SLCK
40		o	GND
41	o		TSAI
42	o		TOS3
43	o		TOS2
44		o	DO1
45		o	DO2
46		o	DO3
47	o		VDD(+5V)
48		o	AD1
49		o	AD3
50		o	BSGN
51	o		TOS1
52	o		TST3
53	o		TISI
54		o	GND
55	o		TIS3
56	o		DBCI
57	o		TIS1
58	o		LCKI
59		o	VTO
60		o	CFER
61	o		VDD(+5V)
62	o		SWSI
63	o		SWCI
64		o	TITO

BLOCK DIAGRAM


CKIN 20
CKO 19
SLCK 39
SYSTEM CLOCK DIVIDER
TO EACH BLOCK
LTCI 21
LTC READER (NORMAL PLAY ONLY)
RSYW 22
ERROR DETECTOR
SDIN 32
PROGRAM LOGIC UNIT
CFER 60
ARITHMETIC LOGIC UNIT
NESY 26
CSIN 27
VDO 5
HDO 14
FRM 24
SYNC SEP.
TIMING GENERATOR
LCKI 58
TIMING GENERATOR
LSHO 25
SCKO 4
SWVI 33
SWMI 34
SWSI 62
SWCI 63
SYSTEM CONTROL
CTLI 30
FWRE 29
DBCI 36
TSAI 41
TST2 38
TST3 52
TEST GENERATOR
51 43 42 53 57 55
TOS1 TOS3 TIS1
TOS2 TISI TIS3
35 TVMO
36 TMDO
64 TITO
37 TRMO
ADDRESS OUTPUT CONTROL
15 AD0
48 AD1
16 AD2
49 AD3
17 AD4
8 ACS
DATA OUTPUT CONTROL
9 DO0
44 DO1
45 DO2
46 DO3
6 DCS
DATA INPUT CONTROL
10 DI0
11 DI1
12 DI2
13 DI3
18 XDB
7 WR
V REGISTER
VITC ENCODER
59 VTO
31 VTGO
Q REGISTER
LTC ENCODER
28 LTCO
3 LSBO
2 LSCO
1 LSDO
C REGISTER
50 BSGN
RESET EACH BLOCK
23 PORI
TO EACH BLOCK
47 VDD
61 VDD
40 GND
54 GND

FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE CHIP SELECT INPUT
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
50	BSGN	BUSY GENERATOR OUTPUT
60	CFER	COLOR FRAME ERROR FLAG OUTPUT
20	CKIN	SYSTEM CLOCK INPUT
19	CKO	CLOCK OUTPUT
27	CSIN	COMPOSITE SYNC INPUT
30	CTLI	CTL(TIMER) SIGNAL INPUT (⌐L)
6	DCS	DATA LINE CHIP SELECT INPUT (NEGATIVE-LOGIC)
10	DI0	DATA BUS INPUT (NEGATIVE-LOGIC)
11	DI1	
12	DI2	
13	DI3	
9	DO0	DATA BUS OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
24	FRM	FRAME SIGNAL OUTPUT (NEGATIVE-LOGIC)
29	FWRE	CTL DIRECTION INPUT
14	HDO	HORIZONTAL SYNC DRIVE OUTPUT
58	LCKI	LTC CLOCK INPUT (SMPTE 9.6kHz/EBU 8kHz)
3	LSBO	LTC SYNCHRONOUS SIGNAL B OUTPUT
2	LSCO	LTC SYNCHRONOUS SIGNAL C OUTPUT
1	LSDO	LTC SYNCHRONOUS SIGNAL D OUTPUT
25	LSHO	LTC SYNCHRONOUS SIGNAL H OUTPUT
21	LTCI	LTC INPUT
28	LTCO	LTC SIGNAL OUTPUT
26	NESY	LOST-SYNC FLAG OUTPUT
23	PORI	POWER ON RESET INPUT
22	RSYW	READ SYNC WORD OUTPUT
4	SCKO	SWITCHES SIGNAL IN CLOCK OUTPUT
32	SDIN	SERIAL DATA INPUT
39	SLCK	SELECT CLOCK INPUT
63	SWCI	SWITCHES SIGNAL C INPUT
34	SWMI	SWITCHES SIGNAL M INPUT
62	SWSI	SWITCHES SIGNAL S INPUT
33	SWVI	SWITCHES SIGNAL V INPUT
5	VDO	VERTICAL SYNC DRIVE OUTPUT
31	VTGO	VITC GATE SIGNAL OUTPUT
59	VTO	VITC SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
18	XDB	EXTERNAL DATA BUS IN FLAG OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
56	DBCI	TEST INPUT (TO BE CONNECTED WITH GND)
57	TIS1	
55	TIS3	
53	TISI	
51	TOS1	
43	TOS2	
42	TOS3	
41	TSAI	
38	TST2	
52	TST3	
64	TITO	TEST OUTPUT (TO BE LEFT OPEN)
36	TNDO	
37	TRMO	
35	TVMO	

#32 SDIN

LSDO	LSCO	LSBO	SDIN	FUNCTION
0	0	0	⌐_	INCREASE IN BIT 'FR or U1'
0	0	1		INCREASE IN BIT 'FT or U2'
0	1	0		INCREASE IN BIT 'SE or U3'
0	1	1		INCREASE IN BIT 'ST or U4'
1	0	0		INCREASE IN BIT 'MN or U5'
1	0	1		INCREASE IN BIT 'MT or U6'
1	1	0		INCREASE IN BIT 'HR or U7'
1	1	1		INCREASE IN BIT 'HT or U8'

NOTE; INFLUENCED BIT IS DECIDED BY FIRST 2 BITS OF SWCI.

#33 SWVI

LSDO	LSCO	LSBO	SWVI	FUNCTION
0	0	0	SW1A†	VITC POSITION SELECT A
0	0	1	SW1B†	
0	1	0	SW1C†	
0	1	1	SW1D†	
1	0	0	SW2A†	VITC POSITION SELECT B
1	0	1	SW2B†	
1	1	0	SW2C†	
1	1	1	SW2D†	

†; VITC POSITION SELECT

SW1D SW2D	SW1C SW2C	SW1B SW2B	SW1A SW2A	INSERTION LINE	
				NTSC	PAL, SECAM
0	0	0	0	LINE 25	LINE 22,335
0	0	0	1	24	21,334
0	0	1	0	23	20,333
0	0	1	1	22	19,332
0	1	0	0	21	18,331
0	1	0	1	20	17,330
0	1	1	0	19	16,329
0	1	1	1	18	15,328
1	0	0	0	17	14,327
1	0	0	1	16	13,326
1	0	1	0	15	12,325
1	0	1	1	14	11,324
1	1	0	0	13	10,323
1	1	0	1	12	9,322
1	1	1	0	11	8,321
1	1	1	1	10	7,320

#34 SWMI

LSDO	LSCO	LSBO	SWMI	FUNCTION
0	0	0	x	INSERT SWMI DATA INTO BIT 'AS1' (NEGATIVE-LOGIC)
0	0	1	x	INSERT SWMI DATA INTO BIT 'AS2' (NEGATIVE-LOGIC)
0	1	0	x	INSERT SWMI DATA INTO BIT 'AS3' (NEGATIVE-LOGIC)
0	1	1	x	INSERT SWMI DATA INTO BIT 'AS4' (NEGATIVE-LOGIC)
1	0	0	x	INSERT SWMI DATA INTO BIT 'AS5' (NEGATIVE-LOGIC)
1	0	1	x	INSERT SWMI DATA INTO BIT 'AS6' (NEGATIVE-LOGIC)
1	1	0	_⌐	COLOR FRAME LOCK IN FIELD 1
1	1	1	0	COLOR FRAME OFF
1	1	1	1	COLOR FRAME ON

X; DON'T CARE.

#62 SWSI

LSDO	LSCO	LSBO	SWSI	FUNCTION
0	0	0	FBS1*	VITC FIELD MARK/ LTC PHASE CORRECTION POSITION SELECT
0	0	1	FBS2*	
0	1	0	FBS3*	
0	1	1	0	PHASE CORRECTION ON
0	1	1	1	PHASE CORRECTION OFF
1	0	0	S1**	SIGNAL FORMAT SELECT
1	0	1	S2**	
1	1	0	S4**	
1	1	1	x	-

x; DON'T CARE.

*; VITC FIELD MARK/LTC PHASE CORRECTION POSITION SELECT

FBS3	FBS2	FBS1	FIELD MARK POSITION	LTC BIT No.
0	0	0	AS1	10
0	0	1	AS2	11
0	1	0	AS3	27
0	1	1	AS4	43
1	0	0	AS5	58
1	0	1	AS6	59
1	1	0	-	-
1	1	1	-	-

NOTE; LTC PHASE CORRECTION BIT OF CX7907 IS FIXED ON BIT-63.

**; SIGNAL FORMAT SELECT

S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	-
0	1	x		
1	0	0	PAL, SECAM	25
1	0	1	NOT ALLOWED	-
1	1	0	NTSC NDF	30
1	1	1	NTSC DF	30

DF; DROP FRAME
NDF; NON DROP FRAME
x; DON'T CARE.

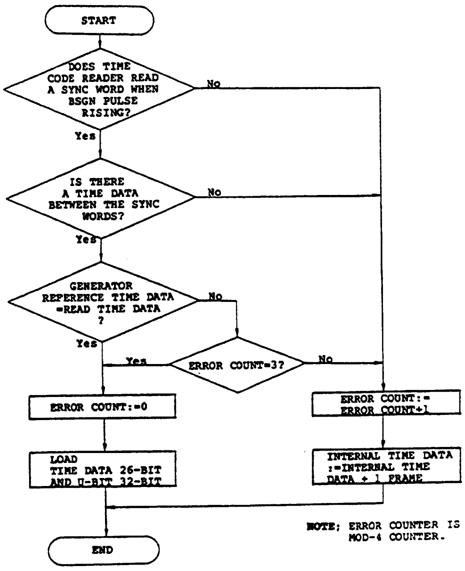
0; LOW LEVEL
1; HIGH LEVEL

#63 SWCI

LSDO	LSCO	LSBO	SWCI	FUNCTION	
0	0	0	0	U-BIT	IN/OUT DATA SELECT*1
0	0	0	1	TIME	
0	0	1	0	CTL	
0	0	1	1	TIME/U-BIT	
0	1	0	x	-	
0	1	1	0	DATA RESET ON*2	
0	1	1	1	DATA RESET OFF	
1	0	0	0	TIME DATA HOLD	
1	0	0	1	TIME DATA RUN	
1	0	1	⌐_	EXTERNAL DATA LOAD*2	
1	1	0	0	EXTRAPOLATION ON	
1	1	0	1	EXTRAPOLATION OFF	
1	1	1	x	-	

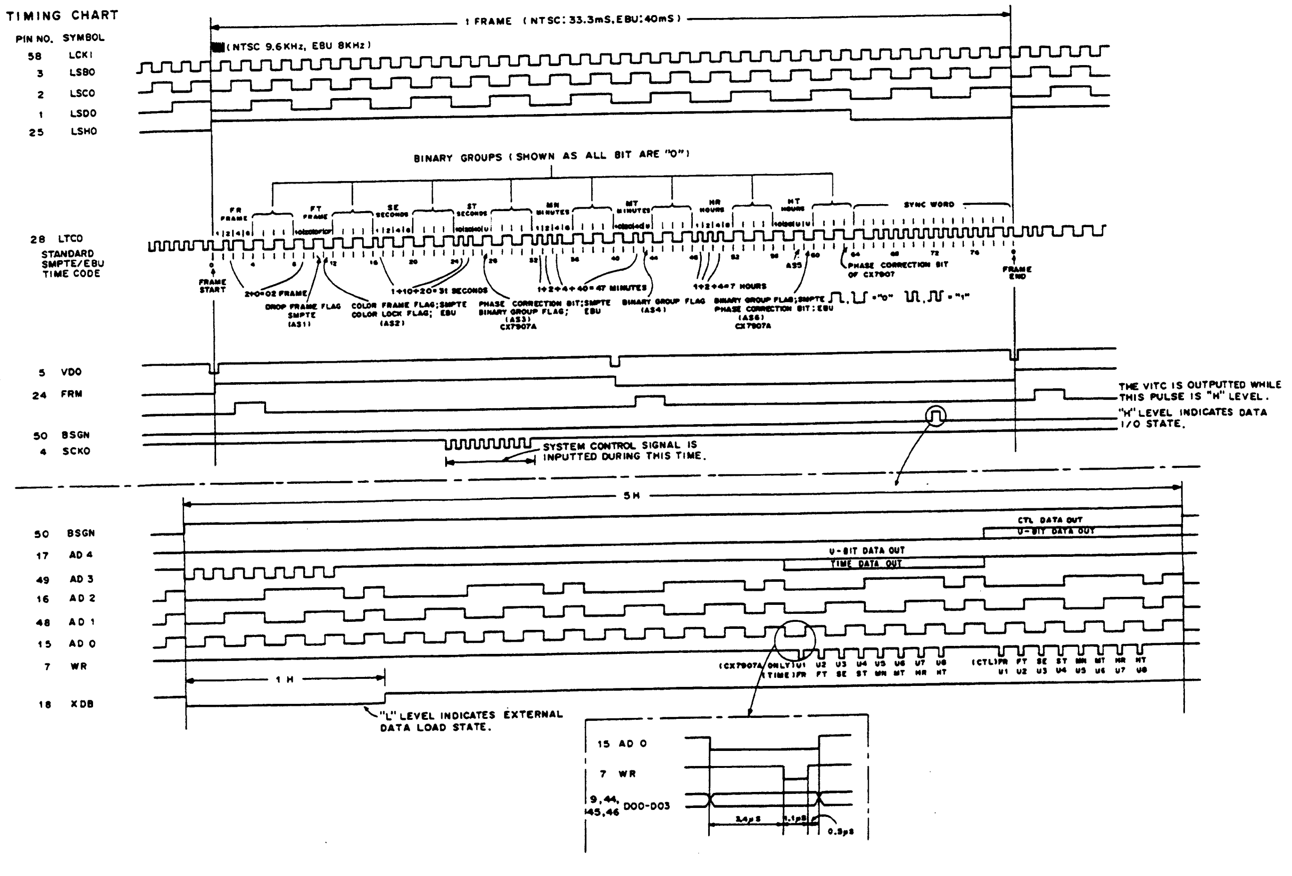
x; DON'T CARE.
*1; REFER TO TIMING CHART (DATA OUT).
*2; INFLUENCED DATA IS DECIDED BY FIRST 2 BITS OF SWCI.

ERROR BYPASS ALGORITHM

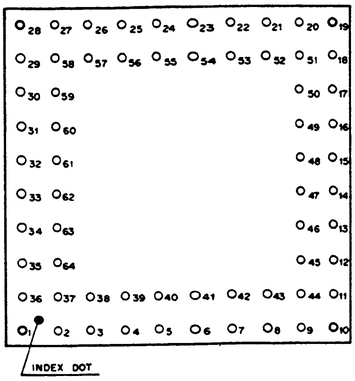

START
DOES TIME CODE READER READ A SYNC WORD WHEN BSGN PULSE RISING?
No
Yes
IS THERE A TIME DATA BETWEEN THE SYNC WORDS?
No
Yes
GENERATOR REFERENCE TIME DATA =READ TIME DATA ?
No
Yes
ERROR COUNT=3?
Yes
No
ERROR COUNT:=0
LOAD TIME DATA 26-BIT AND U-BIT 32-BIT
ERROR COUNT:= ERROR COUNT+1
INTERNAL TIME DATA :=INTERNAL TIME DATA + 1 FRAME
END

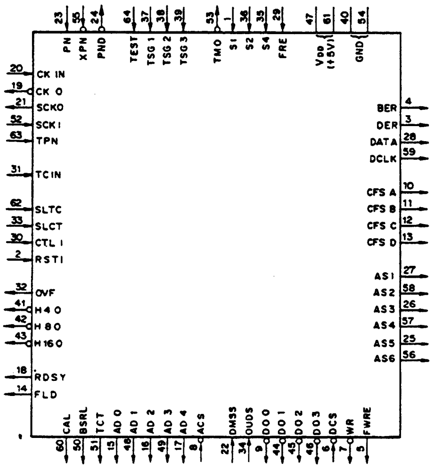
NOTE; ERROR COUNTER IS MOD-4 COUNTER.

TIMING CHART


PIN NO. SYMBOL
58 LCKI
3 LSBO
2 LSCO
1 LSDO
25 LSHO
1 FRAME (NTSC: 33.3mS, EBU: 40mS)
(NTSC 9.6KHz, EBU 8KHz)
BINARY GROUPS (SHOWN AS ALL BIT ARE "0")
FR FRAME
FT FRAME
SE SECONDS
ST SECONDS
MN MINUTES
MT MINUTES
HR HOURS
HT HOURS
SYNC WORD
28 LTCO
STANDARD SMPTE/EBU TIME CODE
FRAME START
FRAME END
2+0=02 FRAME
DROP FRAME FLAG SMPTE (AS1)
COLOR FRAME FLAG; SMPTE COLOR LOCK FLAG; EBU (AS2)
1+10+20=31 SECONDS
PHASE CORRECTION BIT; SMPTE BINARY GROUP FLAG; EBU (AS3) CX7907A
1+2+4+40=47 MINUTES
BINARY GROUP FLAG (AS4)
1+2+4=7 HOURS
BINARY GROUP FLAG; SMPTE PHASE CORRECTION BIT; EBU (AS6) CX7907A
AS5
PHASE CORRECTION BIT OF CX7907
="0"
="1"
5 VDO
24 FRM
50 BSGN
4 SCKO
SYSTEM CONTROL SIGNAL IS INPUTTED DURING THIS TIME.
THE VITC IS OUTPUTTED WHILE THIS PULSE IS "H" LEVEL.
"H" LEVEL INDICATES DATA I/O STATE.
5H
50 BSGN
17 AD 4
49 AD 3
16 AD 2
48 AD 1
15 AD 0
7 WR
18 XDB
1 H
CTL DATA OUT
U-BIT DATA OUT
TIME DATA OUT
(CX7907A ONLY)(U) U1 U2 U3 U4 U5 U6 U7 U8
(TIME) FR FT SE ST MN MT HR HT
(CTL) FR FT SE ST MN MT HR HT
U1 U2 U3 U4 U5 U6 U7 U8
"L" LEVEL INDICATES EXTERNAL DATA LOAD STATE.
15 AD 0
7 WR
9,44, 45,46 DO0-DO3
3.4μs
1.1μs
0.5μs

CX7912 (SONY)
CX7912A (SONY)
C-MOS TIME CODE READER
— TOP VIEW —


28 27 26 25 24 23 22 21 20 19
29 58 57 56 55 54 53 52 51 18
30 59 50 17
31 60 49 16
32 61 48 15
33 62 47 14
34 63 46 13
35 64 45 12
36 37 38 39 40 41 42 43 44 11
1 2 3 4 5 6 7 8 9 10
INDEX DOT


23 PN
55 XPN
24 PND
64 TEST
37 TSG 1
38 TSG 2
39 TSG 3
53 TMO
1 S1
36 S2
35 S4
29 FRE
47 VDD (+5V)
61
40 GND
54
20 CK IN
19 CK O
21 SCKO
52 SCKI
63 TPN
31 TC IN
62 SLTC
33 SLCT
30 CTL I
2 RSTI
32 OVF
41 H 4 0
42 H 8 0
43 H 16 0
18 RDSY
14 FLD
BER 4
DER 3
DATA 28
DCLK 59
CFS A 10
CFS B 11
CFS C 12
CFS D 13
AS1 27
AS2 58
AS3 26
AS4 57
AS5 25
AS6 56
60 CAL
50 BSRL
51 TCT
15 AD 0
48 AD 1
16 AD 2
49 AD 3
17 AD 4
8 ACS
22 DMSS
34 OUDS
9 DO 0
44 DO 1
45 DO 2
46 DO 3
6 DCS
7 WR
5 FWRE

PIN ASSIGNMENT

PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	○		S1	17		○	AD 4	33	○		SLCT	49		○	AD 3
2	○		RSTI	18		○	RDSY	34	○		OUDS	50		○	BSRL
3		○	DER	19		○	CK O	35	○		S4	51		○	TCT
4		○	BER	20	○		CK IN	36	○		S2	52	○		SCKI
5		○	FWRE	21		○	SCKO	37	○		TSG 1	53		○	TMO
6	○		DCS	22	○		DMSS	38	○		TSG 2	54		○	GND
7		○	WR	23	○		PN	39	○		TSG 3	55	○		XPN
8	○		ACS	24		○	PND	40		○	GND	56		○	AS6
9		○	DO 0	25		○	AS5	41		○	H 4 0	57		○	AS4
10		○	CFS A	26		○	AS3	42		○	H 8 0	58		○	AS2
11		○	CFS B	27		○	AS 1	43		○	H 16 0	59		○	DCLK
12		○	CFS C	28		○	DATA	44		○	DO 1	60		○	CAL
13		○	CFS D	29	○		FRE	45		○	DO 2	61	○		VDD(+5V)
14		○	FLD	30	○		CTL I	46		○	DO3	62	○		SLTC
15		○	AD 0	31	○		TC IN	47	○		VDD(+5V)	63	○		TPN
16		○	AD 2	32		○	OVF	48		○	AD 1	64	○		TEST

MODE SELECT

SLCT	SLTC	MODE
0	0	AUTO
0	1	TIME CODE
1	0	CTL
1	1	AUTO

CTL COUNT

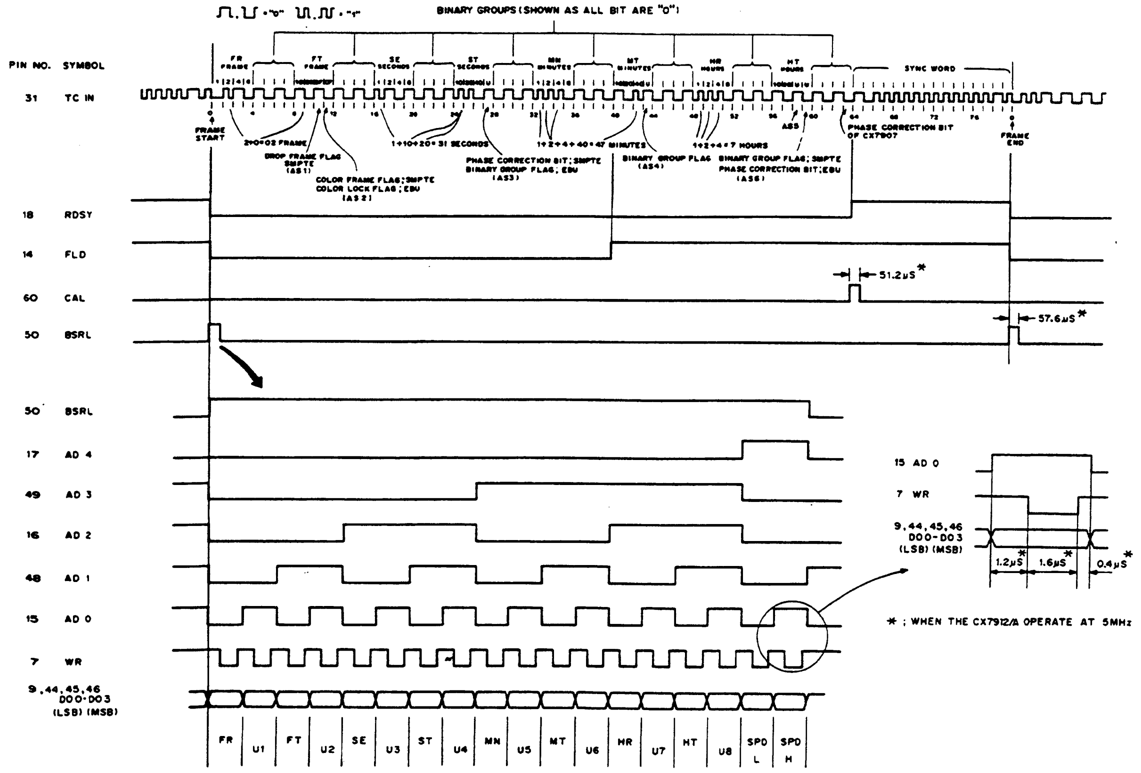
FRE	RSTI	COUNT
0	X	DOWN COUNT
1	X	UP COUNT
X	⏋	RESET

SIGNAL FORMAT SELECT

S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	—
0	1	0		
0	1	1		
1	0	0	PAL, SECAM	25
1	0	1	NOT ALLOWED	—
1	1	0	NTSC (NON DROP FRAME)	30
1	1	1	NTSC (DROP FRAME)	30

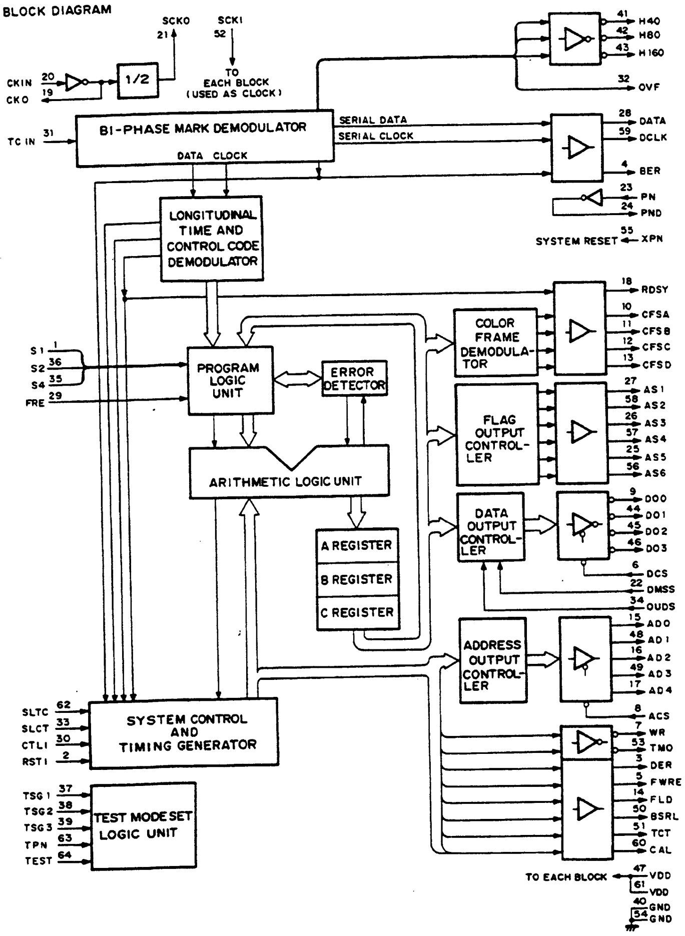
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TIMING CHART


"0" "1"
BINARY GROUPS (SHOWN AS ALL BIT ARE "0")
PIN NO. SYMBOL
FR FRAME
FT FRAME
SE SECONDS
ST SECONDS
MN MINUTES
MT MINUTES
HR HOURS
HT HOURS
SYNC WORD
31 TC IN
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 0
FRAME START
2+0=02 FRAME
DROP FRAME FLAG SMPTE (AS1)
COLOR FRAME FLAG; SMPTE COLOR LOCK FLAG; EBU (AS2)
1+10+20=31 SECONDS
PHASE CORRECTION BIT; SMPTE BINARY GROUP FLAG; EBU (AS3)
1+2+4+40=47 MINUTES
BINARY GROUP FLAG (AS4)
1+2+4=7 HOURS
BINARY GROUP FLAG; SMPTE PHASE CORRECTION BIT; EBU (AS6)
AS5
PHASE CORRECTION BIT OF CX7907
FRAME END
18 RDSY
14 FLD
60 CAL
51.2μS*
50 BSRL
57.6μS*
50 BSRL
17 AD 4
49 AD 3
16 AD 2
48 AD 1
15 AD 0
7 WR
9,44,45,46 DO0-DO3 (LSB) (MSB)
FR U1 FT U2 SE U3 ST U4 MN U5 MT U6 HR U7 HT U8 SPD L SPD H
15 AD 0
7 WR
9,44,45,46 DO0-DO3 (LSB) (MSB)
1.2μS* 1.6μS* 0.4μS*

* ; WHEN THE CX7912/A OPERATE AT 5MHz

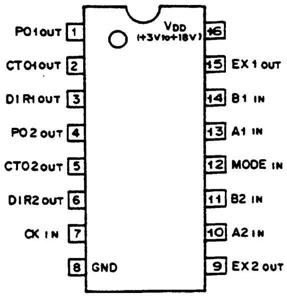
BLOCK DIAGRAM

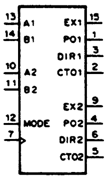

SCKO
SCKI
21
52
TO EACH BLOCK (USED AS CLOCK)
CKIN 20
CKO 19
1/2
TC IN 31
BI-PHASE MARK DEMODULATOR
DATA CLOCK
SERIAL DATA
SERIAL CLOCK
41 H40
42 H80
43 H160
32 OVF
28 DATA
59 DCLK
4 BER
23 PN
24 PND
SYSTEM RESET 55 XPN
LONGITUDINAL TIME AND CONTROL CODE DEMODULATOR
18 RDSY
S1 1
S2 36
S4 35
FRE 29
PROGRAM LOGIC UNIT
ERROR DETECTOR
COLOR FRAME DEMODULATOR
10 CFSA
11 CFSB
12 CFSC
13 CFSD
FLAG OUTPUT CONTROLLER
27 AS1
58 AS2
26 AS3
57 AS4
25 AS5
56 AS6
ARITHMETIC LOGIC UNIT
DATA OUTPUT CONTROLLER
9 DO0
44 DO1
45 DO2
46 DO3
6 DCS
22 DMSS
34 OUDS
A REGISTER
B REGISTER
C REGISTER
ADDRESS OUTPUT CONTROLLER
15 AD0
48 AD1
16 AD2
49 AD3
17 AD4
8 ACS
SLTC 62
SLCT 33
CTLI 30
RSTI 2
SYSTEM CONTROL AND TIMING GENERATOR
7 WR
53 TMO
3 DER
5 FWRE
14 FLD
50 BSRL
51 TCT
60 CAL
TSG1 37
TSG2 38
TSG3 39
TPN 63
TEST 64
TEST MODE SET LOGIC UNIT
TO EACH BLOCK
47 VDD
61 VDD
40 GND
54 GND

FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
27	AS1	PARALLEL DATA OUTPUT
58	AS2	
26	AS3	
57	AS4	
25	AS5	
56	AS6	
4	BER	BI-PHASE MARK ERROR (BIT ERROR) OUTPUT
50	BSRL	DATA OUT FLAG OUTPUT
60	CAL	CALCULATE OUT FLAG OUTPUT
10	CFSA	DEMODULATED COLOR FRAME OUTPUT
11	CFSB	
12	CFSC	
13	CFSD	
20	CKIN	CLOCK INPUT
19	CKO	CLOCK OUTPUT (NEGATIVE-LOGIC)
30	CTLI	CTL SIGNAL INPUT (↓)
28	DATA	DEMODULATED SERIAL DATA OUTPUT
59	DCLK	DEMODULATED CLOCK OUTPUT
6	DCS	DATA LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
3	DER	DEMODULATE DATA ERROR OUTPUT
22	DMSS	ASSIGNED DATA SELECT
9	DO0	DATA OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
14	FLD	FIELD DATA OUTPUT
29	FRE	CTL DIRECTION SIGNAL INPUT
5	FWRE	DEMODULATE DIRECTION SIGNAL OUTPUT
41	H40	SPEED RANGE FLAG 4 OUTPUT (NEGATIVE-LOGIC)
42	H80	SPEED RANGE FLAG 8 OUTPUT (NEGATIVE-LOGIC)
43	H160	SPEED RANGE FLAG 16 OUTPUT (NEGATIVE-LOGIC)
34	OUDS	ERROR BYPASS ON/OFF SELECT
32	OVF	OVERFLOW FLAG OUTPUT
23	PN	POWER ON SIGNAL INPUT
24	PND	POWER ON SIGNAL OUPUT (NEGATIVE-LOGIC)
18	RDSY	READ SYNC WORD DATA OUTPUT
2	RSTI	CTL TIMER RESET INPUT (↓)
1	S1	SIGNAL FORMAT SELECT S1
36	S2	SIGNAL FORMAT SELECT S2
35	S4	SIGNAL FORMAT SELECT S4
52	SCKI	SYSTEM CLOCK INPUT
21	SCKO	SYSTEM CLOCK OUTPUT
33	SLCT	SELECT CTL INPUT
62	SLTC	SELECT LTC INPUT
55	XPN	SYSTEM RESET SIGNAL INPUT (NEGATIVE-LOGIC)
31	TCIN	LONGITUDINAL TIME AND CONTROL CODE INPUT
51	TCT	INPUT SELECT FLAG OUTPUT
53	TMO	TIME OVER SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
64	TEST	TEST MODE SET INPUT (TO BE CONNECTED WITH GND)
63	TPN	
37	TSG1	
38	TSG2	
39	TSG3	

CX23028 (SONY)
C-MOS SYNCHRONOUS ROTATIONAL DIRECTION DETECTOR
— TOP VIEW —


PO1 OUT 1
CTO1 OUT 2
DIR1 OUT 3
PO2 OUT 4
CTO2 OUT 5
DIR2 OUT 6
CK IN 7
8 GND
VDD (+3V to +18V) 16
15 EX1 OUT
14 B1 IN
13 A1 IN
12 MODE IN
11 B2 IN
10 A2 IN
9 EX2 OUT


13 A1
14 B1
10 A2
11 B2
12 MODE
7
EX1 15
PO1 1
DIR1 3
CTO1 2
EX2 9
PO2 4
DIR2 6
CTO2 5

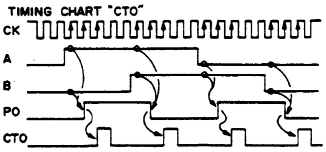
A,B ; SIGNAL INPUTS
EX ; $A \oplus B$
PO ; $A \oplus B$ (SYNCHRONOUS)
DIR ; DIRECTION OUTPUT
CTO ; COUNT PULSE OUTPUT
MODE ; DIR1 & CTO1 MODE SELECT
$\oplus$; EXCLUSIVE-OR

MODE = "1"

DIRECTION OUTPUT "DIR"

INPUTS	DIR
$A \angle B$	1
$B \angle A$	0

TIMING CHART "CTO"



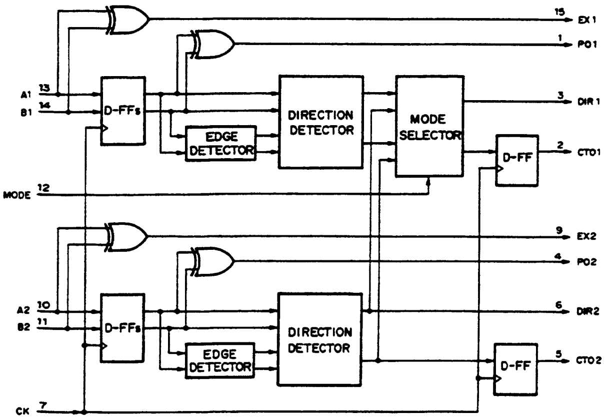
MODE = "0"

DIRECTION OUTPUT "DIR"

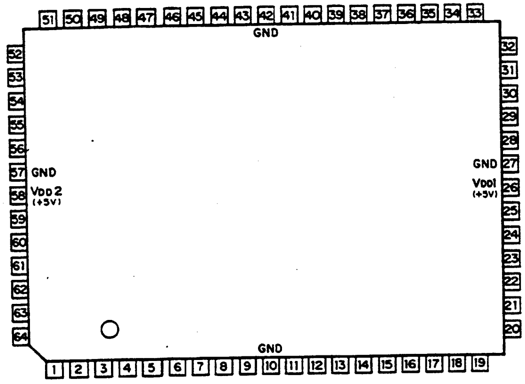
INPUTS		DIR 1	DIR 2
CH1	CH2		
$A1 \angle B1$	$A2 \angle B2$	1	THE SAME FUNCTION OF MODE "1"
$B1 \angle A1$	$A2 \angle B2$	OUTPUT "1" AND "0" ALTERNATELY	
$A1 \angle B1$	$B2 \angle A2$		
$B1 \angle A1$	$B2 \angle A2$	0	

CTO 1 ; CTO 1 with MODE "0" = CTO 1 with MODE "1" + CTO 2
CTO 2 ; THE SAME FUNCTION OF MODE "1"

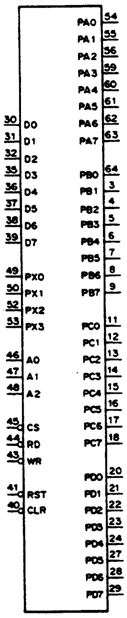
1 ; HIGH LEVEL
0 ; LOW LEVEL
$A \angle B$; THE PHASE OF SIGNAL A IS IN ADVANCE FOR THE PHASE OF B.


A1 13
B1 14
MODE 12
A2 10
B2 11
CK 7
D-FFs
EDGE DETECTOR
DIRECTION DETECTOR
MODE SELECTOR
D-FF
15 EX1
1 PO1
3 DIR1
2 CTO1
9 EX2
4 PO2
6 DIR2
5 CTO2

CXD1095Q (SONY) FLAT PACKAGE
C-MOS I/O PORT EXPANDER
— TOP VIEW —


GND
GND
Vdd2 (+5V)
GND
Vdd1 (+5V)
GND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51
52 53 54 55 56 57 58 59 60 61 62 63 64

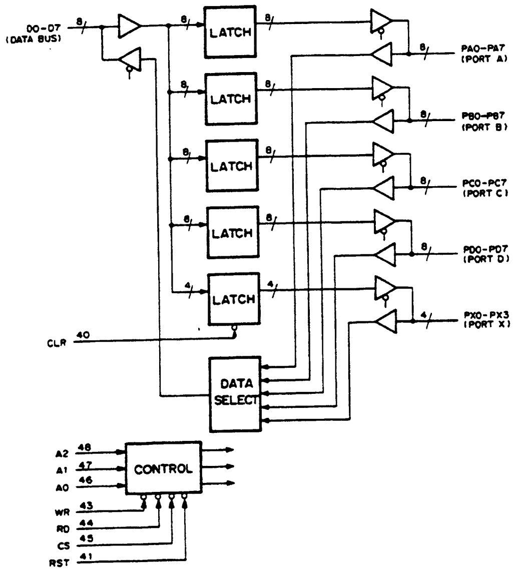
PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1			NC	17	○	○	PC6	33			NC	49	○	○	PX0
2			NC	18	○	○	PC7	34			NC	50	○	○	PX1
3	○	○	PB1	19			NC	35	○	○	D3	51			NC
4	○	○	PB2	20	○	○	PD0	36	○	○	D4	52	○	○	PX2
5	○	○	PB3	21	○	○	PD1	37	○	○	D5	53	○	○	PX3
6	○	○	PB4	22	○	○	PD2	38	○	○	D6	54	○	○	PA0
7	○	○	PB5	23	○	○	PD3	39	○	○	D7	55	○	○	PA1
8	○	○	PB6	24	○	○	PD4	40	○		CLR	56	○	○	PA2
9	○	○	PB7	25			GND	41	○		RST	57			GND
10			GND	26	○		Vdd (+5V)	42			GND	58	○		Vdd (+5V)
11	○	○	PC0	27	○	○	PD5	43	○		WR	59	○	○	PA3
12	○	○	PC1	28	○	○	PD6	44	○		RD	60	○	○	PA4
13	○	○	PC2	29	○	○	PD7	45	○		CS	61	○	○	PA5
14	○	○	PC3	30	○	○	D0	46	○		A0	62	○	○	PA6
15	○	○	PC4	31	○	○	D1	47	○		A1	63	○	○	PA7
16	○	○	PC5	32	○	○	D2	48	○		A2	64	○	○	PB0


30 D0
31 D1
32 D2
35 D3
36 D4
37 D5
38 D6
39 D7
49 PX0
50 PX1
52 PX2
53 PX3
46 A0
47 A1
48 A2
45 CS
44 RD
43 WR
41 RST
40 CLR
PA0 54
PA1 55
PA2 56
PA3 59
PA4 60
PA5 61
PA6 62
PA7 63
PB0 64
PB1 3
PB2 4
PB3 5
PB4 6
PB5 7
PB6 8
PB7 9
PC0 11
PC1 12
PC2 13
PC3 14
PC4 15
PC5 16
PC6 17
PC7 18
PD0 20
PD1 21
PD2 22
PD3 23
PD4 24
PD5 27
PD6 28
PD7 29

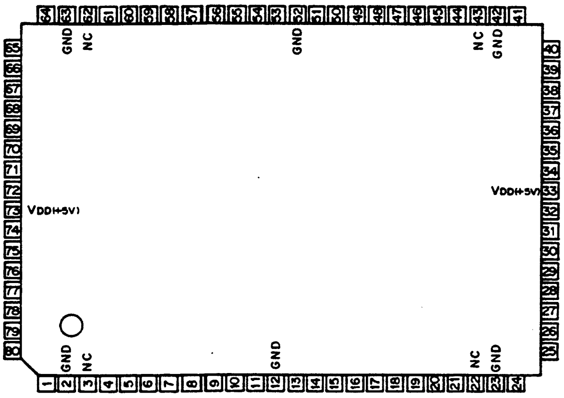
CS	RD	WR	A2	A1	A0	MODE
0	0	1	0	0	0	PORT A → DATA BUS
0	0	1	0	0	1	PORT B → DATA BUS
0	0	1	0	1	0	PORT C → DATA BUS
0	0	1	0	1	1	PORT D → DATA BUS
0	0	1	1	0	0	PORT X → DATA BUS
0	0	1	1	0	1	—
0	0	1	1	1	0	—
0	0	1	1	1	1	—
0	1	0	0	0	0	DATA BUS → PORT A
0	1	0	0	0	1	DATA BUS → PORT B
0	1	0	0	1	0	DATA BUS → PORT C
0	1	0	0	1	1	DATA BUS → PORT D
0	1	0	1	0	0	DATA BUS → PORT X
0	1	0	1	0	1	—
0	1	0	1	1	0	DATA BUS → CTL REG.1
0	1	0	1	1	1	DATA BUS → CTL REG.2
1	X	X	X	X	X	DATA BUS ; HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z, HIGH IMPEDANCE

D0-D7 ; DATA BUS INPUTS/OUTPUTS
CS ; CHIP SELECT INPUT
RD ; READ STROBE INPUT
WR ; WRITE STROBE INPUT
A0-A2 ; ADDRESS INPUT
RST ; RESET INPUT
CLR ; CLEAR INPUT
PA0-PA7 ; PORT A INPUTS/OUTPUTS
PB0-PB7 ; PORT B INPUTS/OUTPUTS
PC0-PC7 ; PORT C INPUTS/OUTPUTS
PD0-PD7 ; PORT D INPUTS/OUTPUTS
PX0-PX3 ; PORT X INPUTS/OUTPUTS


D0-D7 (DATA BUS)
8
LATCH
LATCH
LATCH
LATCH
LATCH
8
4
PA0-PA7 (PORT A)
PB0-PB7 (PORT B)
PC0-PC7 (PORT C)
PD0-PD7 (PORT D)
PX0-PX3 (PORT X)
CLR 40
DATA SELECT
CONTROL
A2 48
A1 47
A0 46
WR 43
RD 44
CS 45
RST 41

CXD1102Q (SONY) FLAT PACKAGE
C-MOS EL DISPLAY UNIT CONTROLLER
— TOP VIEW —


GND
NC
VDD(+5V)
1–80

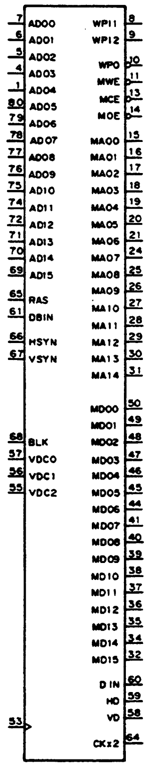
PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	I/O	AD04	17	O	MA02	33		VDD	49	I/O	MD01	65	I	RAS
2		GND	18	O	MA03	34	I/O	MD14	50	I/O	MD00	66	I	HSYN
3		NC	19	O	MA04	35	I/O	MD13	51	I	TEST1	67	I	VSYN
4	I/O	AD03	20	O	MA05	36	I/O	MD12	52		GND	68	I	BLK
5	I/O	AD02	21	O	MA06	37	I/O	MD11	53	I	CK	69	I/O	AD15
6	I/O	AD01	22		NC	38	I/O	MD10	54	I	TEST2	70	I/O	AD14
7	I/O	AD00	23		GND	39	I/O	MD09	55	I	VDC2	71	I/O	AD13
8	I	WPI 1	24	O	MA07	40	I/O	MD08	56	I	VDC1	72	I/O	AD12
9	I	WPI 2	25	O	MA08	41	I/O	MD07	57	I	VDC0	73		VDD
10	O	WPO	26	O	MA09	42		GND	58	O	VD	74	I/O	AD11
11	O	MWE	27	O	MA10	43		NC	59	O	HD	75	I/O	AD10
12		GND	28	O	MA11	44	I/O	MD06	60	O	DIN	76	I/O	AD09
13	O	MCE	29	O	MA12	45	I/O	MD05	61	I	DBIN	77	I/O	AD08
14	O	MOE	30	O	MA13	46	I/O	MD04	62		NC	78	I/O	AD07
15	O	MA00	31	O	MA14	47	I/O	MD03	63		GND	79	I/O	AD06
16	O	MA01	32	I/O	MA15	48	I/O	MD02	64	O	CKX2	80	I/O	AD05

MA00-MA14; MEMORY ADDRESS OUTPUTS
MD00-MA15; MEMORY DATA INPUTS/OUTPUTS
AD00-AD15; MEMORY ADDRESS INPUTS/
MEMORY DATA INPUTS/OUTPUTS

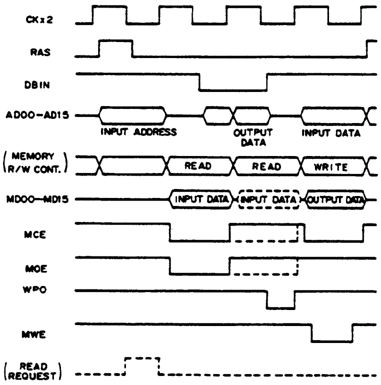
CKX2; 1/2 CK OUTPUT
RAS; READ ENABLE INPUT
DBIN; WRITE ENABLE INPUT
HSYN; H COUNTER START PULSE INPUT
VSYN; V COUNTER START PULSE INPUT

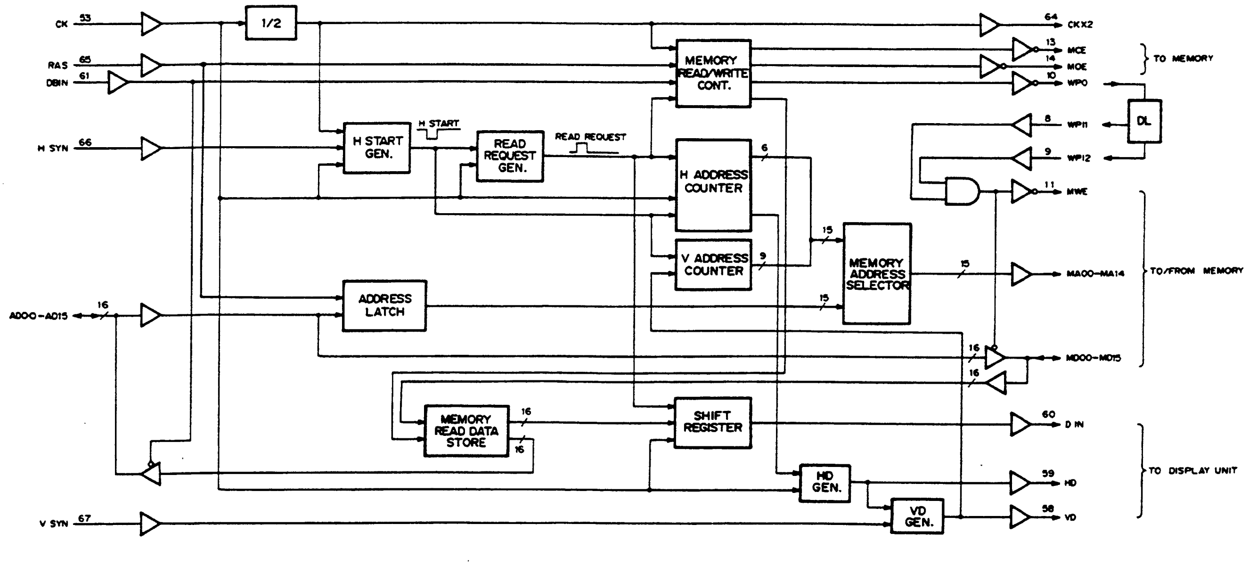
MCE; MEMORY CHIP ENABLE INPUT
MOE; MEMORY OUTPUT ENABLE INPUT
MWE; MEMORY WRITE ENABLE INPUT
WPO; WRITE MODE OUTPUT
WPI1, WPI2; DELAYED WPO INPUTS

DIN; DISPLAY DATA OUTPUT
HD; DISPLAY H SYNC OUT
VD; DISPLAY V SYNC OUT

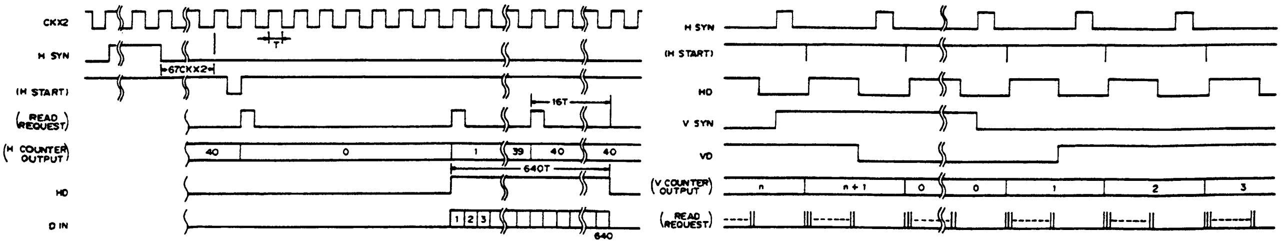

7 AD00
6 AD01
5 AD02
4 AD03
1 AD04
80 AD05
79 AD06
78 AD07
77 AD08
76 AD09
75 AD10
74 AD11
72 AD12
71 AD13
70 AD14
69 AD15
65 RAS
61 DBIN
66 HSYN
67 VSYN
68 BLK
57 VDC0
56 VDC1
55 VDC2
53
WPI1 8
WPI2 9
WPO 10
MWE 11
MCE 13
MOE 14
MA00 15
MA01 16
MA02 17
MA03 18
MA04 19
MA05 20
MA06 21
MA07 24
MA08 25
MA09 26
MA10 27
MA11 28
MA12 29
MA13 30
MA14 31
MD00 50
MD01 49
MD02 48
MD03 47
MD04 46
MD05 45
MD06 44
MD07 41
MD08 40
MD09 39
MD10 38
MD11 37
MD12 36
MD13 35
MD14 34
MD15 32
DIN 60
HD 59
VD 58
CKx2 64

TIMING CHART (MEMORY CONTROL)

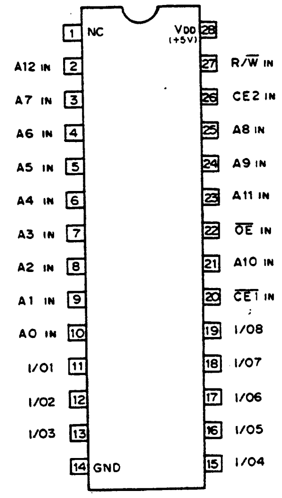



CK 53
RAS 65
DBIN 61
H SYN 66
AD00–AD15 16
V SYN 67
1/2
H START GEN.
H START
READ REQUEST GEN.
READ REQUEST
MEMORY READ/WRITE CONT.
H ADDRESS COUNTER
V ADDRESS COUNTER
MEMORY ADDRESS SELECTOR
ADDRESS LATCH
MEMORY READ DATA STORE
SHIFT REGISTER
HD GEN.
VD GEN.
DL
6
9
15
16
64 CKX2
13 MCE
14 MOE
10 WPO
8 WPI1
9 WPI2
11 MWE
15 MA00–MA14
16 MD00–MD15
60 DIN
59 HD
58 VD
TO MEMORY
TO/FROM MEMORY
TO DISPLAY UNIT

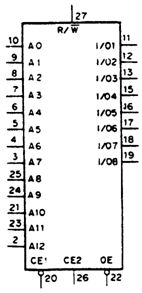
TIMING CHART (DISPLAY DATA READ SEQUENSE)



CXK5864PN-15 (SONY) (ACCESS TIME = 150 nS)
CXK5864PN-15L (SONY) (ACCESS TIME = 150 nS)
HM6264LFP-15 (HITACHI) (ACCESS TIME = 150 nS) FLAT PACKAGE
HM6264LFP-15T (HITACHI) (ACCESS TIME = 150 nS) FLAT PACKAGE
HM6264LP-12 (HITACHI) (ACCESS TIME = 120 nS)
HM6264LP-15 (HITACHI) (ACCESS TIME = 150 nS)
HM6264P-12 (HITACHI) (ACCESS TIME = 120 nS)
HM6264P-15 (HITACHI) (ACCESS TIME = 150 nS)
TC5565P-15 (TOSHIBA) (ACCESS TIME = 150 nS)
TC5565PL-12 (TOSHIBA) (ACCESS TIME = 120 nS)
TC5565PL-15 (TOSHIBA) (ACCESS TIME = 150 nS)
uPD4364C-15 (NEC) (ACCESS TIME = 150 nS)
uPD4364C-15L (NEC) (ACCESS TIME = 150nS)
uPD4364G-15L (NEC) (ACCESS TIME = 150nS) FLAT PACKAGE
uPD4464C-15 (NEC) (ACCESS TIME = 150nS)
uPD4464C-20 (NEC) (ACCESS TIME = 200nS)
C-MOS 8192 WORDx8-BIT RAM
— TOP VIEW —



1 NC
28 VDD (+5V)
A12 IN 2
27 R/W IN
A7 IN 3
26 CE2 IN
A6 IN 4
25 A8 IN
A5 IN 5
24 A9 IN
A4 IN 6
23 A11 IN
A3 IN 7
22 OE IN
A2 IN 8
21 A10 IN
A1 IN 9
20 CE1 IN
A0 IN 10
19 I/O8
I/O1 11
18 I/O7
I/O2 12
17 I/O6
I/O3 13
16 I/O5
14 GND
15 I/O4



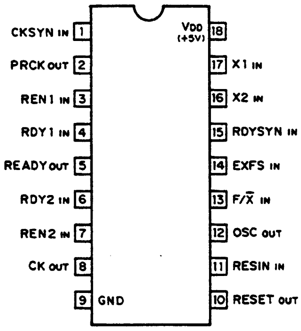
27 R/W
10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
I/O1 11
I/O2 12
I/O3 13
I/O4 15
I/O5 16
I/O6 17
I/O7 18
I/O8 19
CE1 20
CE2 26
OE 22

A0–12 ; ADDRESS INPUTS
CE1,2 ; CHIP ENABLE INPUTS
OE ; OUTPUT ENABLE INPUT
I/O1–8 ; DATA INPUTS/OUTPUTS
R/W ; READ/WRITE INPUT

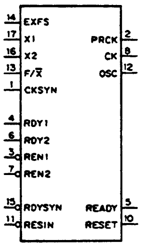
MODE	CE1	CE2	OE	R/W	I/O1~8
READ	0	1	0	1	DATA OUTPUTS
WRITE	0	1	X	0	DATA INPUTS
OUTPUT DESELECT	0	1	1	1	HI-Z
STANDBY	1	X	X	X	HI-Z
	X	0	X	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

CXQ71011P (SONY)
uPD71011C (NEC)
C-MOS CLOCK PULSE GENERATOR/DRIVER
— TOP VIEW —

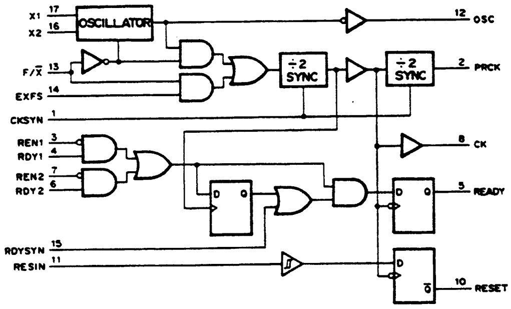


CKSYN IN 1
18 VDD (+5V)
PRCK OUT 2
17 X1 IN
REN1 IN 3
16 X2 IN
RDY1 IN 4
15 RDYSYN IN
READY OUT 5
14 EXFS IN
RDY2 IN 6
13 F/X IN
REN2 IN 7
12 OSC OUT
CK OUT 8
11 RESIN IN
9 GND
10 RESET OUT



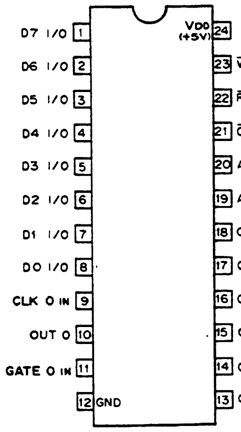
14 EXFS
17 X1
16 X2
13 F/X
1 CKSYN
4 RDY1
6 RDY2
3 REN1
7 REN2
15 RDYSYN
11 RESIN
PRCK 2
CK 8
OSC 12
READY 5
RESET 10

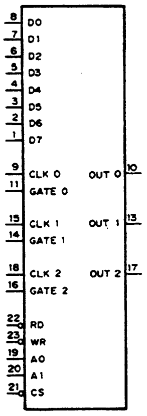
X1,X2 ; CRYSTAL INPUT
EXFS ; EXTERNAL FREQUENCY SOURCE INPUT
F/X ; FREQUENCY/CRYSTAL SELECT INPUT
CK ; PROCESSOR CLOCK OUTPUT
PRCK ; PERIPHERAL CLOCK OUTPUT
OSC ; OSCILLATOR OUTPUT
CKSYN ; CLOCK SYNCHRONIZATION INPUT
RESIN ; RESET INPUT
RDY1,RDY2 ; BUS READY INPUT
REN1,REN2 ; READY ENABLE INPUT
RDYSYN ; READY SYNCHRONIZATION SELECT INPUT



X1 17
X2 16
OSCILLATOR
F/X 13
EXFS 14
CKSYN 1
REN1 3
RDY1 4
REN2 7
RDY2 6
RDYSYN 15
RESIN 11
÷2 SYNC
÷2 SYNC
D Q
D Q
D Q
12 OSC
2 PRCK
8 CK
5 READY
10 RESET

CXQ71054P (SONY)
uPD71054C (NEC)
C-MOS PROGRAMMABLE TIMER COUNTER
— TOP VIEW —


D7 I/O 1
D6 I/O 2
D5 I/O 3
D4 I/O 4
D3 I/O 5
D2 I/O 6
D1 I/O 7
D0 I/O 8
CLK 0 IN 9
OUT 0 10
GATE 0 IN 11
12 GND
VDD (+5V) 24
23 WR IN
22 RD IN
21 CS IN
20 A1 IN
19 A0 IN
18 CLK 2 IN
17 OUT 2
16 GATE 2 IN
15 CLK 1 IN
14 GATE 1 IN
13 OUT 1

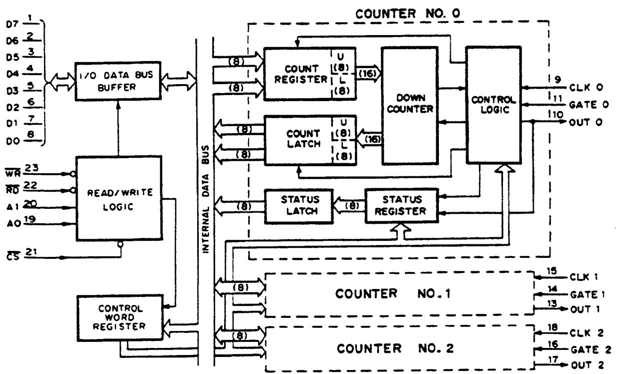

8 D0
7 D1
6 D2
5 D3
4 D4
3 D5
2 D6
1 D7
9 CLK 0
11 GATE 0
OUT 0 10
15 CLK 1
14 GATE 1
OUT 1 13
18 CLK 2
16 GATE 2
OUT 2 17
22 RD
23 WR
19 A0
20 A1
21 CS

FUNCTION TABLE

INPUTS					FUNCTION
CS	RD	WR	A1	A0	
0	1	0	0	0	Load Counter No. 0
0	1	0	0	1	Load Counter No. 1
0	1	0	1	0	Load Counter No. 2
0	1	0	1	1	Control Word
0	0	1	0	0	Read Counter 0
0	0	1	0	1	Read Counter 1
0	0	1	1	0	Read Counter 2
0	0	1	1	1	No-Operation (HI-Z)
1	X	X	X	X	Disable (HI-Z)
0	1	1	X	X	No-Operation (HI-Z)

D7-D0	;	8-BIT DATA I/O
CLK 0-2	;	COUNTER CLOCK
GATE 0-2	;	COUNTER GATE
OUT 0-2	;	COUNTER OUTPUT
RD	;	READ COUNTER
WR	;	WRITE CMD OR DATA
CS	;	CHIP SELECT
A0, A1	;	COUNTER SELECT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE


COUNTER NO. 0
D7 1
D6 2
D5 3
D4 4
D3 5
D2 6
D1 7
D0 8
I/O DATA BUS BUFFER
WR 23
RD 22
A1 20
A0 19
CS 21
READ/WRITE LOGIC
CONTROL WORD REGISTER
INTERNAL DATA BUS
(8)
COUNT REGISTER
U
L
(16)
DOWN COUNTER
CONTROL LOGIC
COUNT LATCH
STATUS LATCH
STATUS REGISTER
9 CLK 0
11 GATE 0
10 OUT 0
COUNTER NO. 1
15 CLK 1
14 GATE 1
13 OUT 1
COUNTER NO. 2
18 CLK 2
16 GATE 2
17 OUT 2

CONTROL WORD FORMAT

D7	D6	D5	D4	D3	D2	D1	D0
SC1	SC0	RL1	RL0	M2	M1	M0	BCD

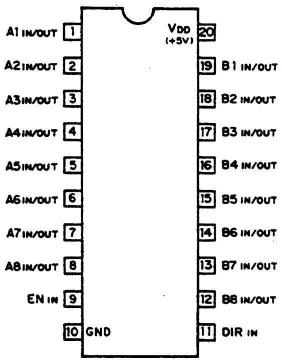
BCD	OPERATION
0	16-BIT BINARY
1	BCD (4-DECADE)

M2	M1	M0	MODE
0	0	0	0
0	0	1	1
X	1	0	2
X	1	1	3
1	0	0	4
1	0	1	5

RL1	RL0	OPERATION
0	0	COUNTER LATCHING
0	1	READ/LOAD LSB ONLY
1	0	READ/LOAD MSB ONLY
1	1	LSB FIRST THEN MSB

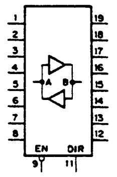
SC1	SC0	SELECTED COUNTER
0	0	COUNTER No. 0
0	1	COUNTER No. 1
1	0	COUNTER No. 2
1	1	MULTIPLE LATCH CMD

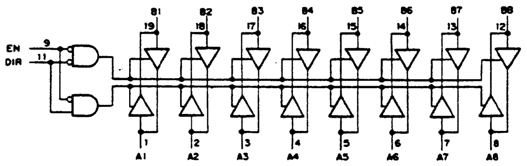
CXQ71086P (SONY)
uPD71086C (NEC)
C-MOS 8-BIT BUS DRIVER/RECEIVER
— TOP VIEW —


A1 IN/OUT 1
A2 IN/OUT 2
A3 IN/OUT 3
A4 IN/OUT 4
A5 IN/OUT 5
A6 IN/OUT 6
A7 IN/OUT 7
A8 IN/OUT 8
EN IN 9
10 GND
VDD (+5V) 20
19 B1 IN/OUT
18 B2 IN/OUT
17 B3 IN/OUT
16 B4 IN/OUT
15 B5 IN/OUT
14 B6 IN/OUT
13 B7 IN/OUT
12 B8 IN/OUT
11 DIR IN

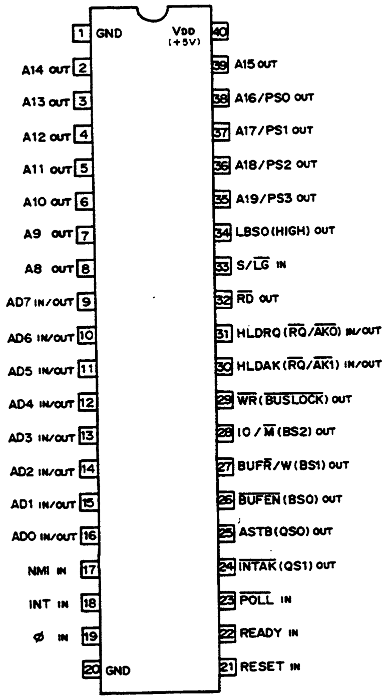
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

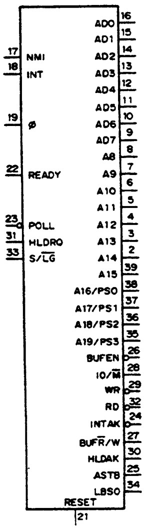
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

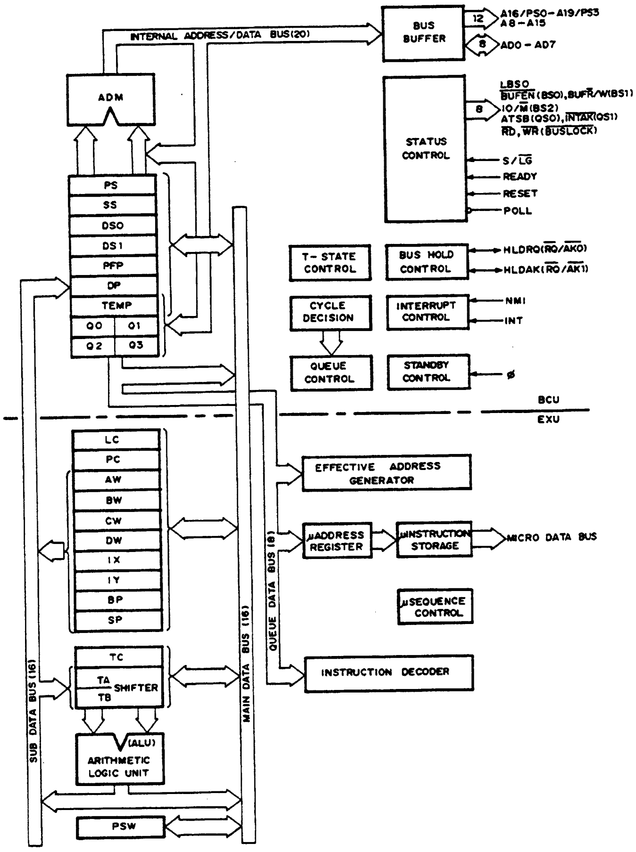

1
2
3
4
5
6
7
8
19
18
17
16
15
14
13
12
A
B
EN
DIR
9
11


EN 9
DIR 11
B1 19
B2 18
B3 17
B4 16
B5 15
B6 14
B7 13
B8 12
A1 1
A2 2
A3 3
A4 4
A5 5
A6 6
A7 7
A8 8

CXQ70108-5 (SONY)
CXQ70108-8 (SONY)
uPD70108D-5 (NEC)
uPD70108D-8 (NEC)
C-MOS 8-BIT MICROPROCESSOR
— TOP VIEW —


1 GND
VDD (+5V) 40
A14 OUT 2
39 A15 OUT
A13 OUT 3
38 A16/PS0 OUT
A12 OUT 4
37 A17/PS1 OUT
A11 OUT 5
36 A18/PS2 OUT
A10 OUT 6
35 A19/PS3 OUT
A9 OUT 7
34 LBS0 (HIGH) OUT
A8 OUT 8
33 S/LG IN
AD7 IN/OUT 9
32 RD OUT
AD6 IN/OUT 10
31 HLDRQ (RQ/AK0) IN/OUT
AD5 IN/OUT 11
30 HLDAK (RQ/AK1) IN/OUT
AD4 IN/OUT 12
29 WR (BUSLOCK) OUT
AD3 IN/OUT 13
28 IO/M (BS2) OUT
AD2 IN/OUT 14
27 BUFR/W (BS1) OUT
AD1 IN/OUT 15
26 BUFEN (BS0) OUT
AD0 IN/OUT 16
25 ASTB (QS0) OUT
NMI IN 17
24 INTAK (QS1) OUT
INT IN 18
23 POLL IN
ø IN 19
22 READY IN
20 GND
21 RESET IN

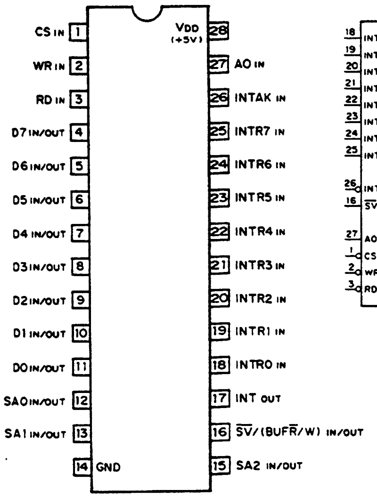

17 NMI
18 INT
19 ø
22 READY
23 POLL
31 HLDRQ
33 S/LG
AD0 16
AD1 15
AD2 14
AD3 13
AD4 12
AD5 11
AD6 10
AD7 9
A8 8
A9 7
A10 6
A11 5
A12 4
A13 3
A14 2
A15 39
A16/PS0 38
A17/PS1 37
A18/PS2 36
A19/PS3 35
BUFEN 26
IO/M 28
WR 29
RD 32
INTAK 24
BUFR/W 27
HLDAK 30
ASTB 25
LBS0 34
RESET 21


INTERNAL ADDRESS/DATA BUS(20)
BUS BUFFER
12
A16/PS0–A19/PS3
A8–A15
8
AD0–AD7
ADM
STATUS CONTROL
LBS0
BUFEN (BS0), BUFR/W(BS1)
8
IO/M (BS2)
ASTB (QS0), INTAK (QS1)
RD, WR (BUSLOCK)
S/LG
READY
RESET
POLL
PS
SS
DS0
DS1
PFP
DP
TEMP
Q0
Q1
Q2
Q3
T-STATE CONTROL
BUS HOLD CONTROL
HLDRQ (RQ/AK0)
HLDAK (RQ/AK1)
CYCLE DECISION
INTERRUPT CONTROL
NMI
INT
QUEUE CONTROL
STANDBY CONTROL
ø
BCU
EXU
LC
PC
AW
BW
CW
DW
IX
IY
BP
SP
EFFECTIVE ADDRESS GENERATOR
μADDRESS REGISTER
μINSTRUCTION STORAGE
MICRO DATA BUS
μSEQUENCE CONTROL
QUEUE DATA BUS (8)
MAIN DATA BUS (16)
SUB DATA BUS (16)
TC
TA
TB
SHIFTER
INSTRUCTION DECODER
(ALU) ARITHMETIC LOGIC UNIT
PSW

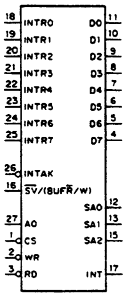
PIN No.	FUNCTION	
	$S/\overline{LG}$=HIGH LEVEL	$S/\overline{LG}$=LOW LEVEL
24	$\overline{INTAK}$	QS1
25	ASTB	QS0
26	$\overline{BUFEN}$	BS0
27	BUF $\overline{R}$/W	BS1
28	IO/$\overline{M}$	BS2
29	$\overline{WR}$	$\overline{BUSLOCK}$
30	HLDAK	$\overline{PQ}/\overline{AK1}$
31	HLDRQ	$\overline{PQ}/\overline{AK0}$
34	LBS0	HIGH LEVEL

A8–A15 ; ADDRESS BUS OUTPUTS
AD0–AD7 ; ADDRESS/DATA BUS INPUTS/OUTPUTS
NMI ; NON-MASKABLE INTERRUPT INPUT
INT ; MASKABLE INTERRUPT INPUT
ø ; CLOCK INPUT
$\overline{INTAK}$; INTERRUPT ACKNOWLEDGE OUTPUT
ASTB ; ADDRESS STROBE OUTPUT
$\overline{BUFEN}$; BUFFER ENABLE OUTPUT
BUF$\overline{R}$/W ; BUFFER $\overline{READ}$/WRITE OUTPUT
IO/$\overline{M}$; IO/$\overline{MEMORY}$ OUTPUT
$\overline{WR}$; WRITE STROBE OUTPUT
HLDAK ; HOLD ACKNOWLEDGE OUTPUT
HLDRQ ; HOLD REQUEST INPUT
$\overline{RD}$; READ STROBE OUTPUT
S/$\overline{LG}$; SMALL/$\overline{LARGE}$ INPUT
LBS0 ; LATCHED BUS STATUS 0 OUTPUT
A16/PS0–A19/PS3 ; ADDRESS BUS/PROCESSOR STATUS OUTPUTS
QS0 ,1 ; QUEUE STATUS OUTPUTS
BS0–BS2 ; BUS STATUS OUTPUTS
$\overline{BUSLOCK}$; BUS LOCK OUTPUT
$\overline{RQ}/\overline{AK0}$,1 ; HOLD REQUEST/ACKNOWLEDGE INPUTS/OUTPUTS

CXQ71059P (SONY)
uPD71059C (NEC)
C-MOS INTERRUPT CONTROL UNIT
— TOP VIEW —

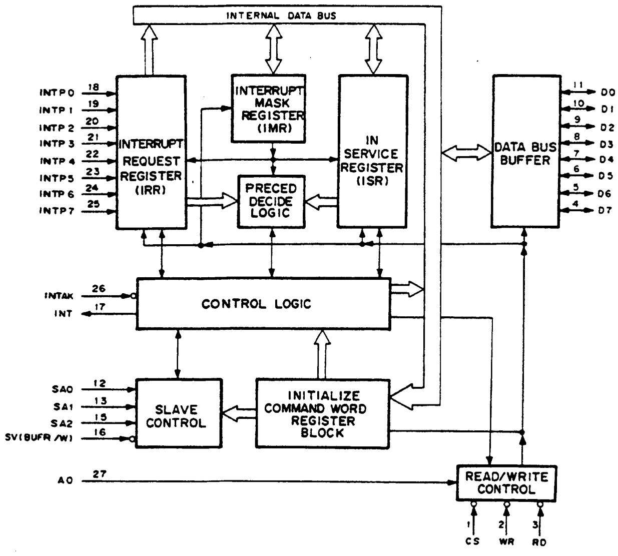


CS IN 1
WR IN 2
RD IN 3
D7 IN/OUT 4
D6 IN/OUT 5
D5 IN/OUT 6
D4 IN/OUT 7
D3 IN/OUT 8
D2 IN/OUT 9
D1 IN/OUT 10
D0 IN/OUT 11
SA0 IN/OUT 12
SA1 IN/OUT 13
14 GND
VDD (+5V) 28
27 A0 IN
26 INTAK IN
25 INTR7 IN
24 INTR6 IN
23 INTR5 IN
22 INTR4 IN
21 INTR3 IN
20 INTR2 IN
19 INTR1 IN
18 INTR0 IN
17 INT OUT
16 SV/(BUFR/W) IN/OUT
15 SA2 IN/OUT



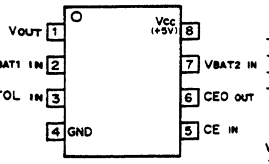
18 INTR0
19 INTR1
20 INTR2
21 INTR3
22 INTR4
23 INTR5
24 INTR6
25 INTR7
26 INTAK
16 SV/(BUFR/W)
27 A0
1 CS
2 WR
3 RD
D0 11
D1 10
D2 9
D3 8
D4 7
D5 6
D6 5
D7 4
SA0 12
SA1 13
SA2 15
INT 17

INTR0–INTR7 ; INTERRUPT REQUEST INPUTS
D0–D7 ; DATA BUS INPUTS/OUTPUTS
CS ; CHIP SELECT INPUT
RD ; READ STROBE INPUT
WR ; WRITE STROBE INPUT
A0 ; ADDRESS INPUT
INT ; INTERRUPT OUTPUT
INTAK ; INTERRUPT ACKNOWLEDGE INPUT
SV/(BUFR/W) ; SLAVE/BUFFER READ/WRITE INPUT/OUTPUT
SA0–SA2 ; SLAVE ADDRESS INPUTS/OUTPUTS

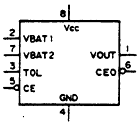


INTERNAL DATA BUS
INTP 0 18
INTP 1 19
INTP 2 20
INTP 3 21
INTP 4 22
INTP 5 23
INTP 6 24
INTP 7 25
INTERRUPT REQUEST REGISTER (IRR)
INTERRUPT MASK REGISTER (IMR)
PRECED DECIDE LOGIC
IN SERVICE REGISTER (ISR)
DATA BUS BUFFER
11 D0
10 D1
9 D2
8 D3
7 D4
6 D5
5 D6
4 D7
INTAK 26
INT 17
CONTROL LOGIC
SA0 12
SA1 13
SA2 15
SV(BUFR/W) 16
SLAVE CONTROL
INITIALIZE COMMAND WORD REGISTER BLOCK
A0 27
READ/WRITE CONTROL
1 CS
2 WR
3 RD

DS1210 (DALLAS SEMICONDUCTOR)
NONVOLATILE CONTROLLER
— TOP VIEW —



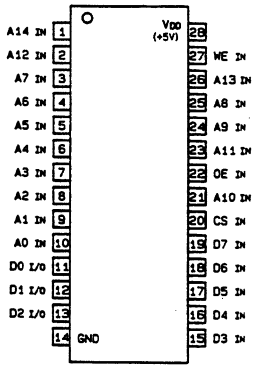
VOUT 1
VBAT1 IN 2
TOL IN 3
4 GND
VCC (+5V) 8
7 VBAT2 IN
6 CEO OUT
5 CE IN



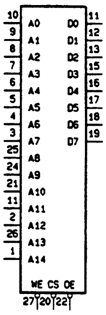
8 VCC
2 VBAT1
7 VBAT2
3 TOL
5 CE
VOUT 1
CEO 6
GND 4

VOUT ; +5V OUTPUT
TOL ; POWER SUPPLY TOLERANCE INPUT
VBAT1, VBAT2 ; + BATTERY INPUTS
CE ; CHIP ENABLE INPUT
CEO ; CHIP ENABLE OUTPUT

DS1235Y (DALLAS SEMICONDUCTOR)
MB84256-10 (FUJITSU) (ACCESS TIME = 100 nS)
MB84256-10LP (FUJITSU) (ACCESS TIME = 100 nS)
MB84256-12 (FUJITSU) (ACCESS TIME = 120 nS)
MB84256-12LP (FUJITSU) (ACCESS TIME = 120 nS)
MB84256-15 (FUJITSU) (ACCESS TIME = 150 nS)
MB84256-15LP (FUJITSU) (ACCESS TIME = 150 nS)
C-MOS 265k (3768x8)-BIT STATIC RAM
— TOP VIEW —



A14 IN 1
A12 IN 2
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10
D0 I/O 11
D1 I/O 12
D2 I/O 13
14 GND
VDD (+5V) 28
27 WE IN
26 A13 IN
25 A8 IN
24 A9 IN
23 A11 IN
22 OE IN
21 A10 IN
20 CS IN
19 D7 IN
18 D6 IN
17 D5 IN
16 D4 IN
15 D3 IN

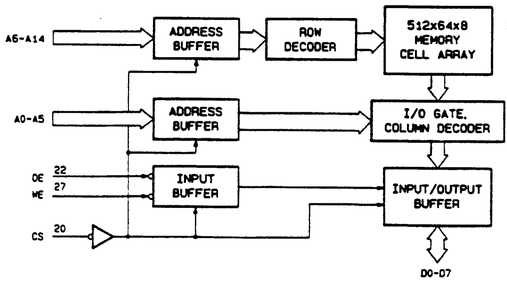


10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
26 A13
1 A14
D0 11
D1 12
D2 13
D3 15
D4 16
D5 17
D6 18
D7 19
WE CS OE
27 20 22

A0–A14; ADDRESS INPUTS
D0–D7; DATA INPUTS/OUTPUTS
CS; CHIP SELECT INPUT
OE; OUTPUT ENABLE INPUT
WE; WRITE ENABLE INPUT

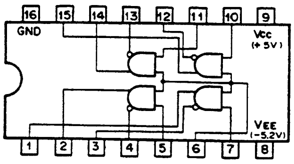
CS	OE	WE	OUTPUTS	FUNCTION
1	X	X	HI-Z	NO SELECTION
0	1	1	HI-Z	OUTPUT DISABLE
0	0	1	DOUT	READ
0	X	0	DIN	WRITE

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



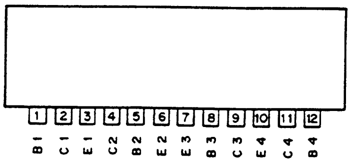
A6–A14
ADDRESS BUFFER
ROW DECODER
512x64x8 MEMORY CELL ARRAY
A0–A5
ADDRESS BUFFER
I/O GATE, COLUMN DECODER
OE 22
WE 27
INPUT BUFFER
INPUT/OUTPUT BUFFER
CS 20
D0–D7

F10124 (FSC)
HD10124 (HITACHI)
MC10124L (MOTOROLA)
MC10H124F (MOTOROLA) FLAT PACKAGE
MC10H124L (MOTOROLA)
MC10H124M (MOTOROLA) FLAT PACKAGE
ECL TTL-TO-ECL TRANSLATOR
— TOP VIEW —

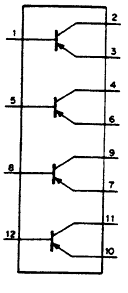


16
15
14
13
12
11
10
9
GND
Vcc (+5V)
VEE (−5.2V)
1
2
3
4
5
6
7
8

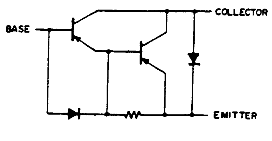
FT5761M (FUJITSU)
MP4504 (TOSHIBA)
DARLINGTON TRANSISTOR ARRAY
— PRINTED SIDE VIEW —



1 B1
2 C1
3 E1
4 C2
5 B2
6 E2
7 E3
8 B3
9 C3
10 E4
11 C4
12 B4

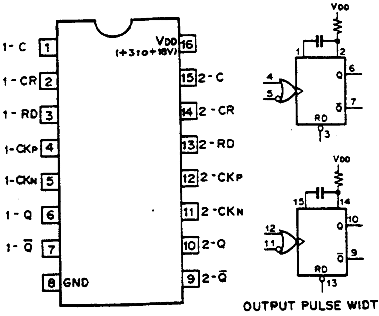


1
2
3
5
4
6
8
9
7
12
11
10



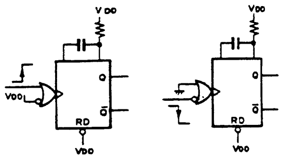
BASE
COLLECTOR
EMITTER

HD14538BFP (HITACHI) FLAT PACKAGE
HD14538BP (HITACHI)
M4538BP (MITUBISHI)
MC14538BCP (MOTOROLA)
MSM4538BRS (OKI)
TC4538BF (TOSHIBA) FLAT PACKAGE
TC4538BP (TOSHIBA)
TC74HC4538F (TOSHIBA) FLAT PACKAGE
uPD4538BC (NEC)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

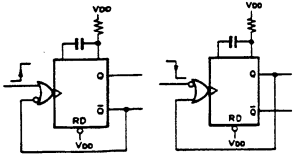


OUTPUT PULSE WIDTH=CR

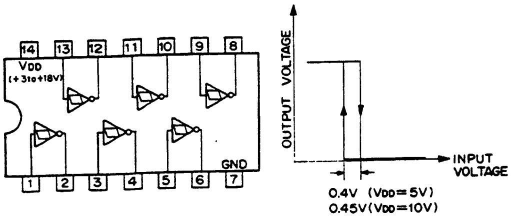
RETRIGGERABLE M.M.V



NON-RETRIGGERABLE M.M.V

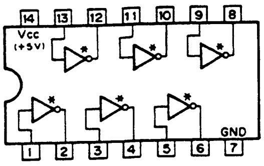


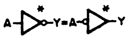
HD14584BFP (HITACHI) FLAT PACKAGE
HD14584BP (HITACHI)
M4584BP (MITUBISHI)
MC14584BCP (MOTOROLA)
MSM4584RS (OKI)
TC4584BP (TOSHIBA)
uPD4584BC (NEC)
uPD4584BG (TOSHIBA)
C-MOS SCHMITT TRIGGER INVERTER
— TOP VIEW —



0.4V (VDD=5V)
0.45V(VDD=10V)
0.90V(VDD=15V)

HD7406P (HITACHI)
M53206P (MITSUBISHI)
SN7406N (TI)
SN7406NS (TI) FLAT PACKAGE
SN74LS06N (TI)
SN74LS06NS (TI) FLAT PACKAGE
TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR
— TOP VIEW —



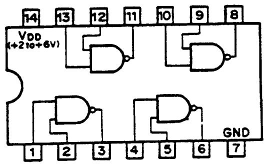


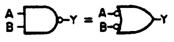
$Y = \bar{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL
*; OPEN COLLECTOR

HD74HC00P (HITACHI)
MC74HC00F (MOTOROLA) FLAT PACKAGE
MC74HC00N (MOTOROLA)
MN74HC00S (MATSUSHITA) FLAT PACKAGE
MSM74HC00RS (OKI)
SN74HC00N (TI)
SN74HC00NS (TI) FLAT PACKAGE
TC74HC00F (TOSHIBA) FLAT PACKAGE
TC74HC00P (TOSHIBA)
uPD74HC00C (NEC)
uPD74HC00G (NEC) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



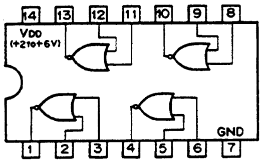


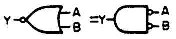
$Y = \overline{A \cdot B} = \bar{A} + \bar{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

HD74HC02P (HITACHI)
MC74HC02N (MOTOROLA)
MSM74HC02RS (OKI)
SN74HC02N (TI)
SN74HC02NS (TI) FLAT PACKAGE
TC74HC02F (TOSHIBA) FLAT PACKAGE
TC74HC02P (TOSHIBA)
uPD74HC02C (NEC)
C MOS 2-INPUT POSITIVE-NOR GATE
— TOP VIEW —



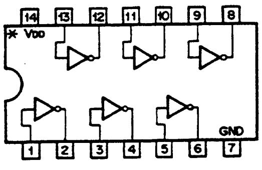


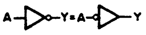
$Y = \overline{A + B} = \bar{A} \cdot \bar{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0: LOW LEVEL
1; HIGH LEVEL

HD74HC04P (HITACHI)
MC74HC04F (MOTOROLA) FLAT PACKAGE
MC74HC04N (MOTOROLA)
MC74HCT04N (MOTOROLA)
MC74HCU04N (MOTOROLA)
MN74HC04S (MATSUSHITA) FLAT PACKAGE
MSM74HC04RS (OKI)
SN74HC04N (TI)
SN74HCU04N (TI)
SN74HC04NS (TI) FLAT PACKAGE
TC74HC04F (TOSHIBA) FLAT PACKAGE
TC74HC04P (TOSHIBA)
TC74HCT04P (TOSHIBA)
TC74HCU04F (TOSHIBA) FLAT PACKAGE
TC74HCU04P (TOSHIBA)
uPD74HC04G (NEC) FLAT PACKAGE
uPD74HCU04C (NEC)
C-MOS INVERTER
— TOP VIEW —





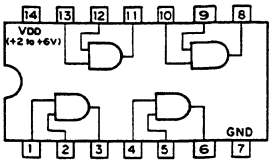
$Y = \bar{A}$

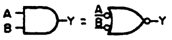
A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

* VDD HC, HCU; +2to+6V
HCT; +5V

HD74HC08P (HITACHI)
MC74HC08N (MOTOROLA)
SN74HC08N (TI)
SN74HC08NS (TI) FLAT PACKAGE
TC74HC08F (TOSHIBA) FLAT PACKAGE
TC74HC08P (TOSHIBA)
uPD74HC08C (NEC)
C-MOS 2-INPUT AND GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD (+2 to +6V)
GND
1
2
3
4
5
6
7

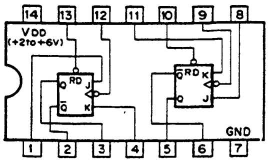


$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

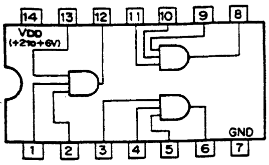
HD74HC107P (HITACHI)
MC74HC107N (MOTOROLA)
SN74HC107N (TI)
TC74HC107P (TOSHIBA)
C-MOS DUAL J-K FLIP-FLOPS
— TOP VIEW —

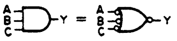

14
13
12
11
10
9
8
VDD (+2 to +6V)
RD
Q
K
Q̄
RD
Q
K
J
Q̄
GND
1
2
3
4
5
6
7

INPUT				OUTPUT
RD	CK	J	K	Q
0	X	X	X	0
1	↓	0	0	NO CHANGE
1	↓	1	0	1
1	↓	0	1	0
1	↓	1	1	TOGGLE

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE

HD74HC11P (HITACHI)
MC74HC11F (MOTOROLA) FLAT PACKAGE
MC74HC11N (MOTOROLA)
SN74HC11N (TI)
SN74HC11NS (TI) FLAT PACKAGE
TC74HC11F (TOSHIBA) FLAT PACKAGE
TC74HC11P (TOSHIBA)
C-MOS 3-INPUT POSITIVE-AND GATE


14
13
12
11
10
9
8
VDD (+2 to +6V)
GND
1
2
3
4
5
6
7

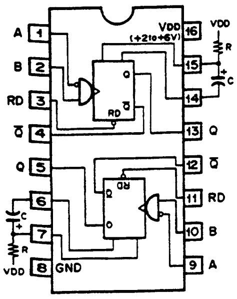


$Y = A \cdot B \cdot C = \overline{\overline{A} + \overline{B} + \overline{C}}$

A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

0; LOW LEVEL
1; HIGH LEVEL

HD74HC123P (HITACHI)
MC74HC123N (MOTOROLA)
TC74HC123F (TOSHIBA) FLAT PACKAGE
TC74HC123P (TOSHIBA)
uPD74HC123AC (NEC)
uPD74HC123C (NEC)
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

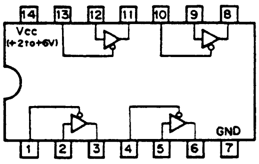

A 1
B 2
RD 3
Q̄ 4
Q 5
6
7
VDD 8 GND
C
R
VDD (+2 to +6V) 16
VDD
R
C
15
14
13 Q
12 Q̄
11 RD
10 B
9 A
Q
RD
Q̄
Q
RD
Q̄

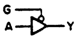
INPUT			OUTPUT	
RD	A	B	Q	Q̄
0	X	X	0	1
1	1	X	0	1
1	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH = 0.46CR

HD74HC125P (HITACHI)
MC74HC125N (MOTOROLA)
SN74HC125N (TI)
uPD74HC125C (NEC)
C-MOS BUS BUFFER GATES WITH 3-STATE OUTPUT
— TOP VIEW —

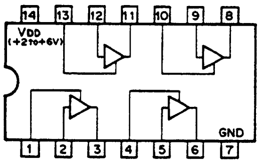

14
13
12
11
10
9
8
Vcc (+2 to +6V)
GND
1
2
3
4
5
6
7

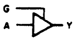


G	A	Y
0	0	0
0	1	1
1	X	HI-Z

0; LOW LEVEL X; DON'T CARE
1; HIGH LEVEL HI-Z; HIGH IMPEDANCE

HD74HC126P (HITACHI)
MC74HC126N (MOTOROLA)
SN74HC126N (TI)
C-MOS BUS BUFFER GATE WITH 3-STATE OUTPUT
— TOP VIEW —

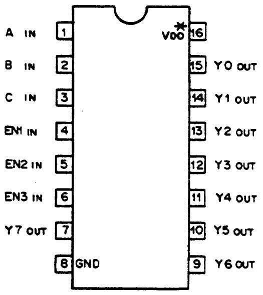

14
13
12
11
10
9
8
VDD (+2 to +6V)
GND
1
2
3
4
5
6
7

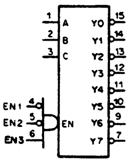


G	A	Y
1	1	1
1	0	0
0	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

HD74HC138P (HITACHI)
HD74HCT138P (HITACHI)
MC74HC138N (MOTOROLA)
MC74HCT138N (MOTOROLA)
SN74HC138N (TI)
SN74HC138NS (TI) FLAT PACKAGE
TC74HC138F (TOSHIBA) FLAT PACKAGE
TC74HC138P (TOSHIBA)
TC74HCT138P (TOSHIBA)
C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
— TOP VIEW —


A IN 1
B IN 2
C IN 3
EN1 IN 4
EN2 IN 5
EN3 IN 6
Y7 OUT 7
8 GND
9 Y6 OUT
10 Y5 OUT
11 Y4 OUT
12 Y3 OUT
13 Y2 OUT
14 Y1 OUT
15 Y0 OUT
VDD ✱ 16


1 A
2 B
3 C
EN1 4
EN2 5
EN3 6
EN
Y0 15
Y1 14
Y2 13
Y3 12
Y4 11
Y5 10
Y6 9
Y7 7

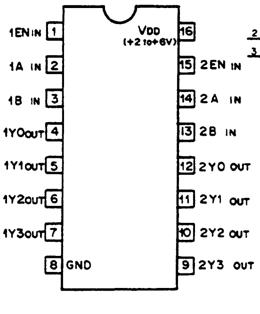
✱ VDD HC; +2 to +6V
HCT; +5V

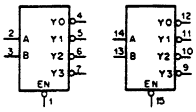
INPUT				OUTPUT							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

$EN = \overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 : LOW LEVEL
1 : HIGH LEVEL
X ; DON'T CARE

HD74HC139P (HITACHI)
MC74HC139N (MOTOROLA)
MSM74HC139RS (OKI)
SN74HC139N (TI)
TC74HC139F (TOSHIBA) FLAT PACKAGE
TC74HC139P (TOSHIBA)
uPD74HC139C (NEC)
C-MOS 1-OF-4 DECODER/DEMULTIPLEXER
— TOP VIEW —

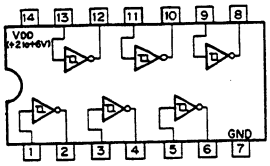

1EN IN 1
1A IN 2
1B IN 3
1Y0 OUT 4
1Y1 OUT 5
1Y2 OUT 6
1Y3 OUT 7
8 GND
9 2Y3 OUT
10 2Y2 OUT
11 2Y1 OUT
12 2Y0 OUT
13 2B IN
14 2A IN
15 2EN IN
VDD (+2 to +6V) 16


2 A
3 B
Y0 4
Y1 5
Y2 6
Y3 7
EN
1
14 A
13 B
Y0 12
Y1 11
Y2 10
Y3 9
EN
15

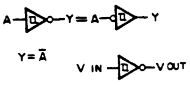
INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

HD74HC14P (HITACHI)
MC74HC14N (MOTOROLA)
MSM74HC14RS (OKI)
SN74HC14N (TI)
TC74HC14F (TOSHIBA) FLAT PACKAGE
TC74HC14P (TOSHIBA)
uPD74HC14C (NEC)
uPD74HC14G (NEC) FLAT PACKAGE
C-MOS SCHMITT TRIGGER INVERTER
— TOP VIEW —



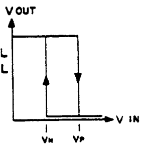
14 13 12 11 10 9 8
VDD (+2to+6V)
GND
1 2 3 4 5 6 7



A
Y=A
Y
Y=Ā
V IN
V OUT

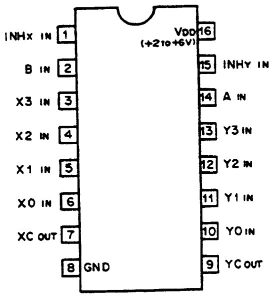
A	Y
0	1
1	0

0;LOW LEVEL
1;HIGH LEVEL

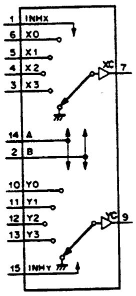


VDD	VN	VP
2.0V	0.75V	1.25V
4.5V	1.9V	2.7V
6.0V	2.6V	3.6V

HD74HC153P (HITACHI)
MC74HC153N (MOTOROLA)
SN74HC153N (TI)
SN74HC153NS (TI) FLAT PACKAGE
TC74HC153F (TOSHIBA) FLAT PACKAGE
TC74HC153P (TOSHIBA)
C-MOS 4-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



INHx IN 1
B IN 2
X3 IN 3
X2 IN 4
X1 IN 5
X0 IN 6
XC OUT 7
8 GND
VDD (+2to+6V) 16
15 INHY IN
14 A IN
13 Y3 IN
12 Y2 IN
11 Y1 IN
10 Y0 IN
9 YC OUT

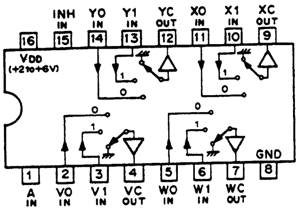


1 INHx
6 X0
5 X1
4 X2
3 X3
XC 7
14 A
2 B
10 Y0
11 Y1
12 Y2
13 Y3
YC 9
15 INHY

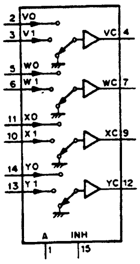
CONTROL IN			ON CHANNEL
INH	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	GND

0:LOW LEVEL
1:HIGH LEVEL
X:DON'T CARE

HD74HC157P (HITACHI)
MC74HC157N (MOTOROLA)
MSM74HC157RS (OKI)
SN74HC157N (TI)
TC74HC157F (TOSHIBA) FLAT PACKAGE
TC74HC157P (TOSHIBA)
uPD74HC157C (NEC)
C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



INH IN
Y0 IN
Y1 IN
YC OUT
X0 IN
X1 IN
XC OUT
16 15 14 13 12 11 10 9
VDD (+2to+6V)
0
1
GND
1 2 3 4 5 6 7 8
A IN
V0 IN
V1 IN
VC OUT
W0 IN
W1 IN
WC OUT

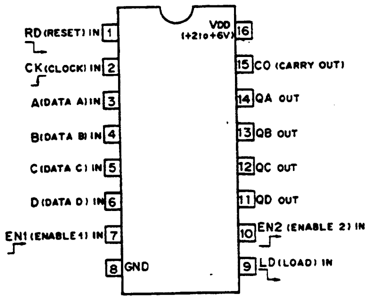


2 V0
3 V1
VC 4
5 W0
6 W1
WC 7
11 X0
10 X1
XC 9
14 Y0
13 Y1
YC 12
A
INH
1
15

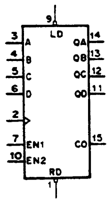
CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	GND

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

HD74HC161P (HITACHI)
MC74HC161N (MOTOROLA)
SN74HC161N (TI)
TC74HC161F (TOSHIBA) FLAT PACKAGE
TC74HC161P (TOSHIBA)
C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER
— TOP VIEW —



RD (RESET) IN 1
CK (CLOCK) IN 2
A (DATA A) IN 3
B (DATA B) IN 4
C (DATA C) IN 5
D (DATA D) IN 6
EN1 (ENABLE 1) IN 7
8 GND
VDD (+2to+6V) 16
15 CO (CARRY OUT)
14 QA OUT
13 QB OUT
12 QC OUT
11 QD OUT
10 EN2 (ENABLE 2) IN
9 LD (LOAD) IN



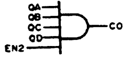
9
LD
3 A
4 B
5 C
6 D
2
7 EN1
10 EN2
RD
1
QA 14
QB 13
QC 12
QD 11
CO 15

MODE SELECTION

CONTROL INPUT				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

CARRY OUTPUT "CO"



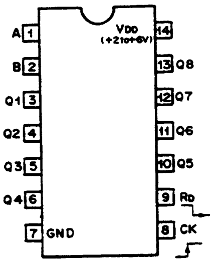
QA
QB
QC
QD
EN2
CO

CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

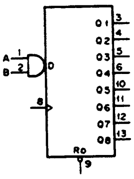
COUNT SEQUENCE

COUNT	OUTPUT			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

HD74HC164P (HITACHI)
MC74HC164N (MOTOROLA)
SN74HC164N (TI)
TC74HC164P (TOSHIBA)
uPD74HC164C (NEC)
C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER
— TOP VIEW —



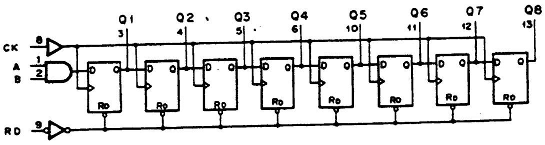
A 1
B 2
Q1 3
Q2 4
Q3 5
Q4 6
7 GND
VDD (+2to+6V) 14
13 Q8
12 Q7
11 Q6
10 Q5
9 RD
8 CK



A 1
B 2
8
RD
9
Q1 3
Q2 4
Q3 5
Q4 6
Q5 10
Q6 11
Q7 12
Q8 13

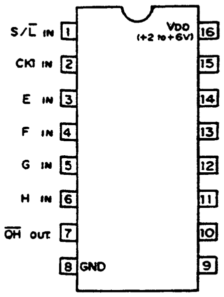
INPUTS				OUTPUTS			
RD	CK	A	B	Q1	Q2	----	Q8
0	X	X	X	0	0	0	0
1	0	X	X	Q1o	Q2o	----	Q8o
1	⌠	1	1	1	Q1n	----	Q7n
1	⌠	0	X	0	Q1n	----	Q7n
1	⌠	X	0	0	Q1n	----	Q7n

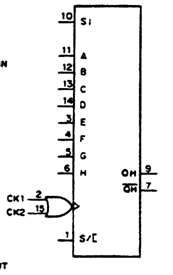
0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE



Q1 3
Q2 4
Q3 5
Q4 6
Q5 10
Q6 11
Q7 12
Q8 13
CK 8
A 1
B 2
RD 9
D
Q
RD

HD74HC165P (HITACHI)
MC74HC165N (MOTOROLA)
SN74HC165N (TI)
TC74HC165P (TOSHIBA)
C-MOS SERIAL- OR PARALLEL-INPUT SHIFT REGISTER
— TOP VIEW —

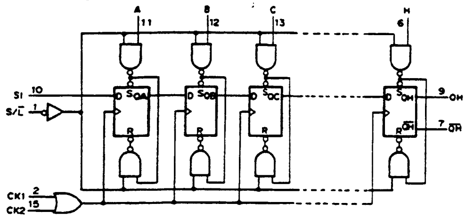

S/L̄ IN 1
CK1 IN 2
E IN 3
F IN 4
G IN 5
H IN 6
Q̄H OUT 7
8 GND
VDD (+2 to +6V) 16
15 CK2 IN
14 D IN
13 C IN
12 B IN
11 A IN
10 SI IN
9 QH OUT


10 SI
11 A
12 B
13 C
14 D
3 E
4 F
5 G
6 H
CK1 2
CK2 15
1 S/L̄
QH 9
Q̄H 7

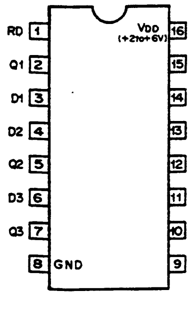
SI ; SERIAL DATA IN
A–H ; PARALLEL DATA IN
CK1,CK2 ; CLOCK IN (↑)
S/L̄ ; SHIFT/LOAD IN
QH Q̄H ; 8th BIT OUT (COMPLEMENTALY)

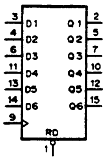
INPUTS				CONTENTS		OUTPUT	OPERATION
S/L̄	CK1+CK2	SI	A·······H	QA	QB····	QH	
0	X	X	a······h	a	b·····	h	PARALLEL LOAD
1	↑	0	X	0	QAo···	QGo	RIGHT SHIFT
1	↑	1	X	1	QAo···	QGo	
1	↓	X	X	QAo	QBo···	QHo	NO COUNT
1	0	X	X	QAo	QBo···	QHo	
1	1	X	X	QAo	QBo···	QHo	

0 ; LOW LEVEL 1 ; HIGH LEVEL X ; DON'T CARE
a — h ; LEVEL OF INPUTS A–H
QAo–QHo ; LEVEL OF QA–QH BEFORE THE INDICATED INPUT CONDITIONS WERE ESTABLISHED


A 11
B 12
C 13
H 6
SI 10
S/L̄ 1
D S QA
D S QB
D S QC
D S QH
R
9 QH
7 Q̄H
CK1 2
CK2 15

HD74HC174P (HITACHI)
MC74HC174N (MOTOROLA)
SN74HC174N (TI)
TC74HC174F (TOSHIBA) FLAT PACKAGE
TC74HC174P (TOSHIBA)
C-MOS D-TYPE FLIP-FLOP WITH RESET
— TOP VIEW —

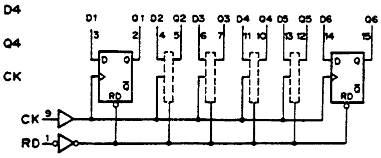

RD 1
Q1 2
D1 3
D2 4
Q2 5
D3 6
Q3 7
8 GND
VDD (+2to+6V) 16
15 Q6
14 D6
13 D5
12 Q5
11 D4
10 Q4
9 CK


3 D1
4 D2
6 D3
11 D4
13 D5
14 D6
9
Q1 2
Q2 5
Q3 7
Q4 10
Q5 12
Q6 15
RD
1

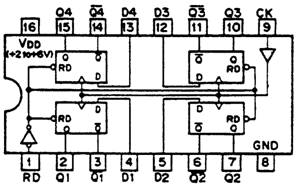
EACH FLIP-FLOP

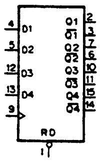
INPUT			OUT
RD	CK	D	Q
0	X	X	0
1	↑	0	0
1	↑	1	1
1	0	X	Q0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE


D1 Q1 D2 Q2 D3 Q3 D4 Q4 D5 Q5 D6 Q6
3 2 4 5 6 7 11 10 13 12 14 15
D Q
Q̄
RD
CK 9
RD 1

HD74HC175P (HITACHI)
MC74HC175N (MOTOROLA)
MSM74HC175RS (OKI)
SN74HC175N (TI)
SN74HC175NS (TI) FLAT PACKAGE
TC74HC175F (TOSHIBA) FLAT PACKAGE
TC74HC175P (TOSHIBA)
uPD74HC175C (NEC)
C-MOS D-TYPE FLIP-FLOP WITH RESET
— TOP VIEW —

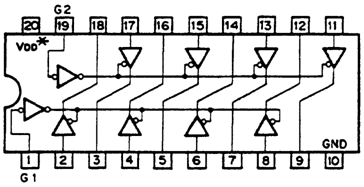

Q4 Q̄4 D4 D3 Q̄3 Q3 CK
16 15 14 13 12 11 10 9
VDD (+2to+6V)
Q Q̄ RD D
GND
1 2 3 4 5 6 7 8
RD Q1 Q̄1 D1 D2 Q̄2 Q2

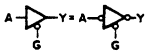

4 D1
5 D2
12 D3
13 D4
9
Q1 2
Q̄1 3
Q2 7
Q̄2 6
Q3 10
Q̄3 11
Q4 15
Q̄4 14
RD
1

RD	CK	D	Q	Q̄
0	X	X	0	1
1	↑	1	1	0
1	↑	0	0	1
1	0	X	Qo	Q̄o

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

HD74HC244P (HITACHI)
MC74HC244N (MOTOROLA)
MC74HCT244N (MOTOROLA)
MSM74HC244RS (OKI)
SN74HC244N (TI)
SN74HC244NS (TI) FLAT PACKAGE
SN74HCT244N (TI)
TC74HC244F (TOSHIBA) FLAT PACKAGE
TC74HC244P (TOSHIBA)
TC74HCT244P (TOSHIBA)
uPD74HC244C (NEC)
C-MOS BUS BUFFER WITH 3-STATE OUTPUT
— TOP VIEW —

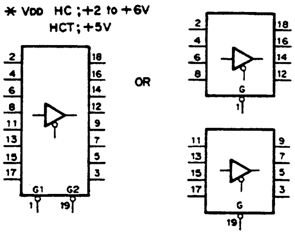

G2
20 19 18 17 16 15 14 13 12 11
VDD*
GND
1 2 3 4 5 6 7 8 9 10
G1



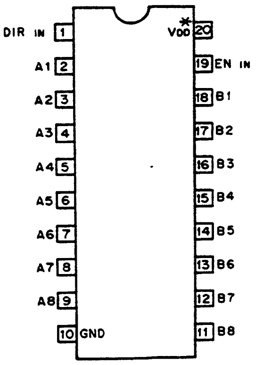
G	A	Y
0	0	0
0	1	1
1	X	HI-Z

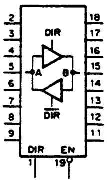
0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE
HI-Z: HIGH IMPEDANCE

* VDD HC ; +2 to +6V
HCT ; +5V


2 4 6 8 11 13 15 17
18 16 14 12 9 7 5 3
G1 G2
1 19
OR
2 4 6 8
18 16 14 12
G
1
11 13 15 17
9 7 5 3
G
19

HD74HC245P (HITACHI)
HD74HCT245P (HITACHI)
MC74HC245N (MOTOROLA)
MC74HCT245N (MOTOROLA)
MSM74HC245RS (OKI)
SN74HC245N (TI)
SN74HC245NS (TI) FLAT PACKAGE
SN74HCT245N (TI)
TC74HC245F (TOSHIBA) FLAT PACKAGE
TC74HC245P (TOSHIBA)
uPD74HC245C (NEC)
uPD74HC245G (NEC) FLAT PACKAGE
C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUT
— TOP VIEW —

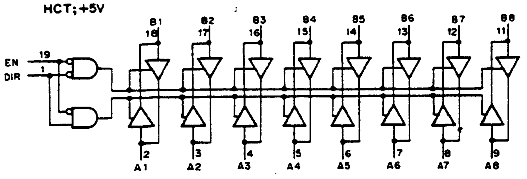

DIR IN 1
A1 2
A2 3
A3 4
A4 5
A5 6
A6 7
A7 8
A8 9
10 GND
*VDD 20
19 EN IN
18 B1
17 B2
16 B3
15 B4
14 B5
13 B6
12 B7
11 B8


DIR
A
B
DIR
DIR
EN
1
19

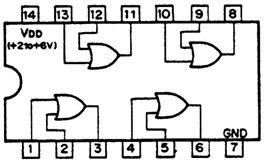
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

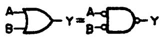
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

* VDD HC; +2 to +6V
HCT; +5V


EN
DIR
19
1
B1 18
B2 17
B3 16
B4 15
B5 14
B6 13
B7 12
B8 11
2 A1
3 A2
4 A3
5 A4
6 A5
7 A6
8 A7
9 A8

HD74HC32P (HITACHI)
MC74HC32N (MOTOROLA)
SN74HC32N (TI)
SN74HC32NS (TI) FLAT PACKAGE
TC74HC32F (TOSHIBA) FLAT PACKAGE
TC74HC32P (TOSHIBA)
C-MOS 2-INPUT OR GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+2 to +6V)
GND
1 2 3 4 5 6 7

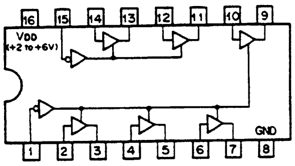


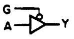
$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

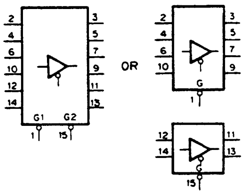
HD74HC367P (HITACHI)
MC74HC367F (MOTOROLA) FLAT PACKAGE
MC74HC367N (MOTOROLA)
MN74HC367S (MATSUSHITA) FLAT PACKAGE
SN74HC367N (TI)
SN74HC367NS (TI) FLAT PACKAGE
TC74HC367F (TOSHIBA) FLAT PACKAGE
TC74HC367P (TOSHIBA)
uPD74HC367C (NEC)
uPD74HC367G (NEC) FLAT PACKAGE
C-MOS BUS DRIVER WITH 3-STATE OUTPUTS
— TOP VIEW —


16 15 14 13 12 11 10 9
VDD (+2 to +6V)
GND
1 2 3 4 5 6 7 8

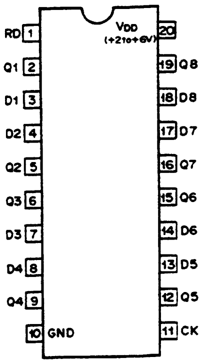


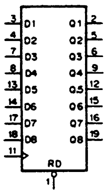
G	A	Y
0	0	0
0	1	1
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE


2 3
4 5
6 7
10 9
12 11
14 13
G1 G2
1 15
OR
2 3
4 5
6 7
10 9
G
1
12 11
14 13
G
15

HD74HC273P (HITACHI)
MC74HC273N (MOTOROLA)
SN74HC273N (TI)
SN74HC273NS (TI) FLAT PACKAGE
TC74HC273F (TOSHIBA) FLAT PACKAGE
TC74HC273P (TOSHIBA)
C-MOS D-TYPE FLIP-FLOP WITH RESET
— TOP VIEW —

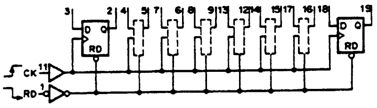

RD 1
Q1 2
D1 3
D2 4
Q2 5
Q3 6
D3 7
D4 8
Q4 9
10 GND
VDD (+2 to +6V) 20
19 Q8
18 D8
17 D7
16 Q7
15 Q6
14 D6
13 D5
12 Q5
11 CK


3 D1 Q1 2
4 D2 Q2 5
7 D3 Q3 6
8 D4 Q4 9
13 D5 Q5 12
14 D6 Q6 15
17 D7 Q7 16
18 D8 Q8 19
11
RD
1

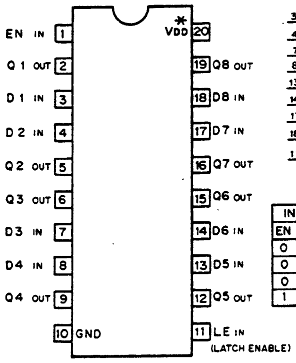
EACH FLIP-FLOP

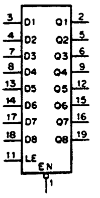
INPUT			OUT
RD	CK	D	Q
0	X	X	0
1	↑	0	0
1	↑	1	1
1	0	X	Qo

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE


3 2 4 5 7 6 8 9 13 12 14 15 17 16 18 19
D Q
RD
CK 11
RD 1

HD74HC373P (HITACHI)
HD74HCT373P (HITACHI)
MC74HC373N (MOTOROLA)
MC74HCT373N (MOTOROLA)
MSM74HC373RS (FUJITSU)
SN74HC373N (TI)
SN74HC373NS (TI) FLAT PACKAGE
TC74HC373F (TOSHIBA) FLAT PACKAGE
TC74HC373P (TOSHIBA)
TC74HCT373P (TOSHIBA)
uPD74HC373C (NEC)
C-MOS 3-STATE OUTPUTS OCTAL LATCHES
— TOP VIEW —

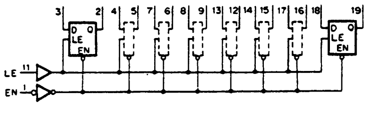

EN IN 1
Q1 OUT 2
D1 IN 3
D2 IN 4
Q2 OUT 5
Q3 OUT 6
D3 IN 7
D4 IN 8
Q4 OUT 9
10 GND
* VDD 20
19 Q8 OUT
18 D8 IN
17 D7 IN
16 Q7 OUT
15 Q6 OUT
14 D6 IN
13 D5 IN
12 Q5 OUT
11 LE IN (LATCH ENABLE)


3 D1 Q1 2
4 D2 Q2 5
7 D3 Q3 6
8 D4 Q4 9
13 D5 Q5 12
14 D6 Q6 15
17 D7 Q7 16
18 D8 Q8 19
11 LE
EN
1

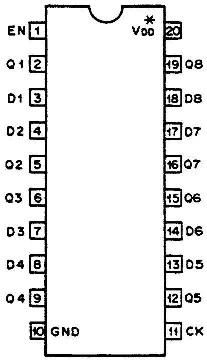
INPUTS			OUT
EN	D	LE	Q
0	1	1	1
0	0	1	0
0	X	0	Qo
1	X	X	HI-Z

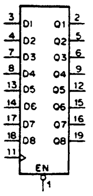
HI-Z;
HIGH IMPEDANCE
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

* VDD HC; +2 to +6V
HCT; +5V


3 2 4 5 7 6 8 9 13 12 14 15 17 16 18 19
D Q
LE
EN
LE 11
EN 1

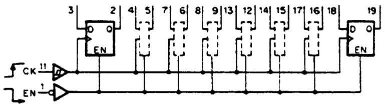
HD74HC374P (HITACHI)
HD74HCT374P (HITACHI)
MC74HC374F (MOTOROLA) FLAT PACKAGE
MC74HC374N (MOTOROLA)
MC74HCT374N (MOTOROLA)
MN74HC374S (MATSUSHITA) FLAT PACKAGE
MSM74HC374RS (OKI)
SN74HC374N (TI)
SN74HCT374N (TI)
TC74HC374F (TOSHIBA) FLAT PACKAGE
TC74HC374P (TOSHIBA)
uPD74HC374C (NEC)
uPD74HC374G (NEC) FLAT PACKAGE
C-MOS 3-STATE OCTAL D-TYPE FLIP-FLOP
— TOP VIEW —


EN 1
Q1 2
D1 3
D2 4
Q2 5
Q3 6
D3 7
D4 8
Q4 9
10 GND
VDD 20 *
19 Q8
18 D8
17 D7
16 Q7
15 Q6
14 D6
13 D5
12 Q5
11 CK


D1
D2
D3
D4
D5
D6
D7
D8
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
EN

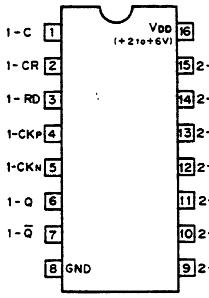
INPUTS			OUT
EN	D	CK	Q
0	1	⎍	1
0	0	⎍	0
0	X	0	Qo
1	X	X	HI-Z

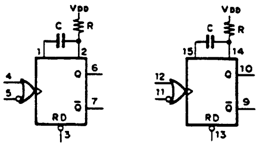
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



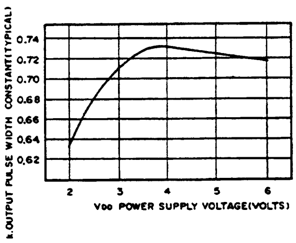
*VDD HC; +2to+6V
HCT; +5V

HD74HC4538P (HITACHI)
MC74HC4538N (MOTOROLA)
MSM74HC4538RS (OKI)
TC74HC4538P (TOSHIBA)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —


1-C 1
1-CR 2
1-RD 3
1-CKP 4
1-CKN 5
1-Q 6
1-Q̄ 7
8 GND
VDD (+2to+6V) 16
15 2-C
14 2-CR
13 2-RD
12 2-CKP
11 2-CKN
10 2-Q
9 2-Q̄

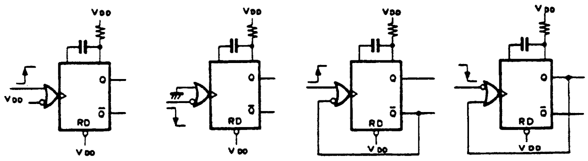


OUTPUT PULSE WIDTH = k·C·R

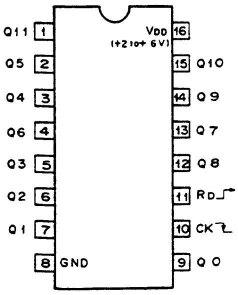


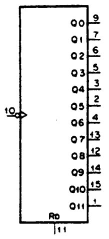
RETRIGGERABLE M.M.V

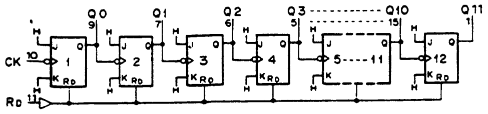
NON-RETRIGGERABLE M.M.V



HD74HC4040P (HITACHI)
MC74HC4040N (MOTOROLA)
MSM74HC4040RS (OKI)
SN74HC4040N (TI)
SN74HC4040NS (TI) FLAT PACKAGE
TC74HC4040P (TOSHIBA)
C-MOS 12-STAGE RIPPLE CARRY BINARY COUNTER/DRIVER
— TOP VIEW —


Q11 1
Q5 2
Q4 3
Q6 4
Q3 5
Q2 6
Q1 7
8 GND
VDD (+2to+6V) 16
15 Q10
14 Q9
13 Q7
12 Q8
11 RD
10 CK
9 Q0


Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
RD

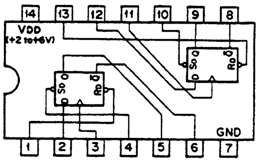

Q0
Q1
Q2
Q3
Q10
Q11
CK
RD
1
2
3
4
5----11
12

COUNT	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	1	0
3	0	0	0	0	0	0	0	0	0	0	1	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
4095	1	1	1	1	1	1	1	1	1	1	1	1

RD	Q11 ········ Q0
1	ALL LOW
0	COUNT

0; LOW LEVEL
1; HIGH LEVEL

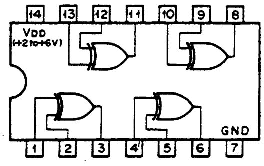
HD74HC74P (HITACHI)
MC74HC74F (MOTOROLA) FLAT PACKAGE
MC74HC74N (MOTOROLA)
MN74HC74S (MATSUSHITA) FLAT PACKAGE
MSM74HC74RS (OKI)
SN74HC74N (TI)
SN74HC74NS (TI) FLAT PACKAGE
TC74HC74F (TOSHIBA) FLAT PACKAGE
TC74HC74P (TOSHIBA)
uPD74HC74C (NEC)
uPD74HC74G (NEC) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —


14
13
12
11
10
9
8
VDD (+2to+6V)
GND
1
2
3
4
5
6
7
So
Rd
Q
Q̄

INPUTS				OUTPUTS	
So	Rd	CK	D	Qn+1	$\overline{Qn+1}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	⎍	1	1	0
1	1	⎍	0	0	1
1	1	0	X	Qn	$\overline{Qn}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

HD74HC86P (HITACHI)
MC74HC86N (MOTOROLA)
SN74HC86N (TI)
SN74HC86NS (TI) FLAT PACKAGE
TC74HC86F (TOSHIBA) FLAT PACKAGE
TC74HC86P (TOSHIBA)
uPD74HC86C (NEC)
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

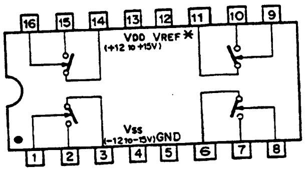

14
13
12
11
10
9
8
VDD (+2to+6V)
GND
1
2
3
4
5
6
7

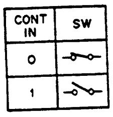
$Y = \bar{A} \cdot B + A \cdot \bar{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

HI1-0201-5 (HARRIS)
HI1-201 (HARRIS)
C-MOS ANALOG SWITCH
— TOP VIEW —


16
15
14
13
12
11
10
9
VDD VREF ✻
(+12 to +15V)
Vss
(−12 to −15V) GND
1
2
3
4
5
6
7
8



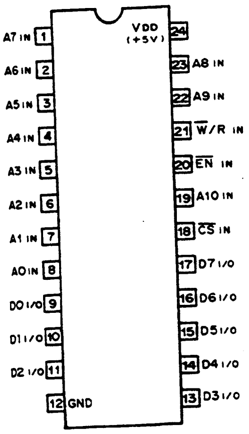
CONT IN	SW
0	
1	

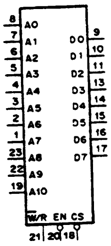
0 ; LOW LEVEL
1 ; HIGH LEVEL

✻NOTE

INTERFACIAL DEVICE		VREF CONNECTION
TTL		Open
C-MOS	VDD ≦ 5.5V	Open
	VDD > 5.5V	To VDD of Interfacial IC

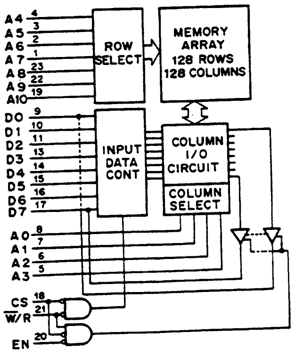
HM6116ALSP-12 (HITACHI) (ACCESS TIME = 120 nS)
HM6116ALSP-15 (HITACHI) (ACCESS TIME = 150 nS)
HM6116ASP-12 (HITACHI) (ACCESS TIME = 120 nS)
HM6116ASP-15 (HITACHI) (ACCESS TIME = 150 nS)
HM6116LFP-2 (HITACHI) (ACCESS TIME = 120 nS) FLAT PACKAGE
HM6116LFP-3 (HITACHI) (ACCESS TIME = 150 nS) FLAT PACKAGE
HM6116LFP-4 (HITACHI) (ACCESS TIME = 200 nS) FLAT PACKAGE
HM6116LP-2 (HITACHI) (ACCESS TIME = 120 nS)
HM6116LP-3 (HITACHI) (ACCESS TIME = 150 nS)
HM6116LP-4 (HITACHI) (ACCESS TIME = 200 nS)
HM6116P-2 (HITACHI) (ACCESS TIME = 120 nS)
HM6116P-3 (HITACHI) (ACCESS TIME = 150 nS)
HM6116P-4 (HITACHI) (ACCESS TIME = 200 nS)
M58725P (MITSUBISHI) (ACCESS TIME = 200 nS)
M5M5117P (MITSUBISHI) (ACCESS TIME = 200 nS)
M5M5117P-12 (MITSUBISHI) (ACCESS TIME = 120 nS)
M5M5117P-15 (MITSUBISHI) (ACCESS TIME = 150 nS)
MB8416A-12P-SK (FUJITSU) (ACCESS TIME = 120 nS)
MB8416A-15 (FUJITSU) (ACCESS TIME = 150 nS)
MB8416A-15P-SK (FUJITSU) (ACCESS TIME = 150nS)
MSM5128-12RS (OKI) (ACCESS TIME = 150 nS)
MSM5128-15RS (OKI) (ACCESS TIME = 150 nS)
MSM5128-20GS (OKI) (ACCESS TIME = 200 nS) FLAT PACKAGE
MSM5128-20RS (OKI) (ACCESS TIME = 200 nS)
TC5517AFL (TOSHIBA) (ACCESS TIME = 250 nS) FLAT PACKAGE
TC5517APL (TOSHIBA) (ACCESS TIME = 250 nS)
C-MOS 16384(2048x8)-BIT HIGH SPEED STATIC RAM
— TOP VIEW —


A7 IN 1
A6 IN 2
A5 IN 3
A4 IN 4
A3 IN 5
A2 IN 6
A1 IN 7
A0 IN 8
D0 I/O 9
D1 I/O 10
D2 I/O 11
12 GND
VDD (+5V) 24
23 A8 IN
22 A9 IN
21 W/R IN
20 EN IN
19 A10 IN
18 CS IN
17 D7 I/O
16 D6 I/O
15 D5 I/O
14 D4 I/O
13 D3 I/O


A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
D0
D1
D2
D3
D4
D5
D6
D7
W/R EN CS
21 20 18

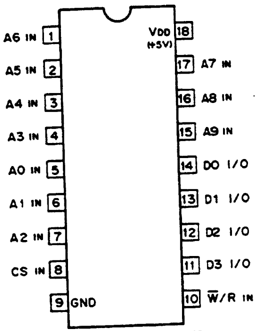
INPUTS			FUNCTION
CS	W/R	EN	
0	0	X	WRITE
0	1	0	READ
0	1	1	DISABLE (OUTPUT=HI-Z)
1	X	X	DISABLE (OUTPUT=HI-Z)

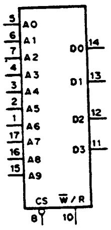
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE


A4
A5
A6
A7
A8
A9
A10
ROW SELECT
MEMORY ARRAY
128 ROWS
128 COLUMNS
D0
D1
D2
D3
D4
D5
D6
D7
INPUT DATA CONT
COLUMN I/O CIRCUIT
COLUMN SELECT
A0
A1
A2
A3
CS
W/R
EN

A0 – A10 ; ADDRESS INPUTS
W/R ; WRITE/READ ENABLE
EN ; OUTPUT ENABLE
CS ; CHIP SELECT
D0 – D7 ; DATA INPUTS/OUTPUTS

HM6148HP-45 (HITACHI) C-MOS
HM6148HP-55 (HITACHI) C-MOS
MB8149-45 (FUJITSU) N-MOS
MB8149-55 (FUJITSU) N-MOS
MB8149-70 (FUJITSU) N-MOS
MB8149L-55 (FUJITSU) N-MOS
MB8149L-70 (FUJITSU) N-MOS
MBM2149L-55 (FUJITSU) N-MOS
MBM2149L-70 (FUJITSU) N-MOS
4096-BIT (1024x4) STATIC RAM WITH 3-STATE OUTPUT
— TOP VIEW —


A6 IN 1
A5 IN 2
A4 IN 3
A3 IN 4
A0 IN 5
A1 IN 6
A2 IN 7
CS IN 8
9 GND
VDD (+5V) 18
17 A7 IN
16 A8 IN
15 A9 IN
14 D0 I/O
13 D1 I/O
12 D2 I/O
11 D3 I/O
10 W/R IN

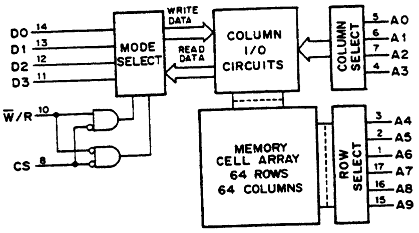

A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
D0
D1
D2
D3
CS W/R
8 10

FUNCTION TABLE

CS	W/R	MODE	I/O
0	0	WRITE	INPUT
0	1	READ	OUTPUT
1	X	INHIBIT	HIGH Z

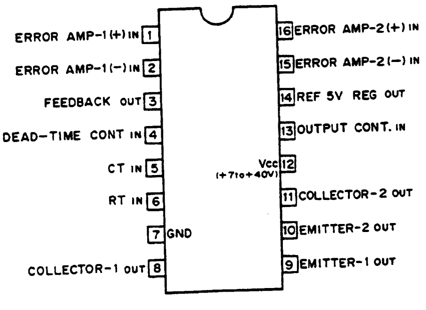
A0 — A9 ; ADDRESS INPUTS
CS ; CHIP SELECT INPUT
D0 — D3 ; DATA INPUT/OUTPUT (3-STATE)
W/R ; WRITE/READ ENABLE INPUT

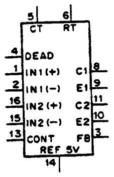
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HIGH Z ; HIGH IMPEDANCE


D0
D1
D2
D3
MODE SELECT
WRITE DATA
READ DATA
COLUMN I/O CIRCUITS
COLUMN SELECT
A0
A1
A2
A3
W/R
CS
MEMORY CELL ARRAY
64 ROWS
64 COLUMNS
ROW SELECT
A4
A5
A6
A7
A8
A9

TYPE	−45	−55	−70	L−55	L−70	HP-45	HP-55
ADDRESS ACCESS TIME (MAX)	45nS	55nS	70nS	55nS	70nS	45nS	55nS
CHIP SELECT ACCESS TIME (MAX)	20nS	25nS	30nS	25nS	30nS	45nS	55nS
Icc (MAX)	180mA	180mA	180mA	125mA	125mA	80mA	80mA

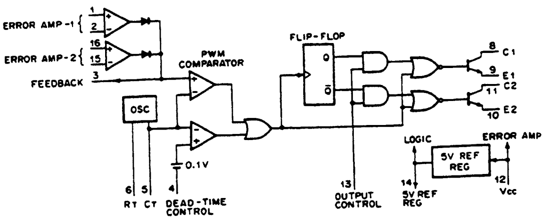
IR9494 (SHARP)
IR3M02 (SHARP)
MB3759 (FUJITSU)
TL494CN (TI)
uPC494C (NEC)
PWM POWER CONTROL
— TOP VIEW —


ERROR AMP-1(+) IN 1
ERROR AMP-1(−) IN 2
FEEDBACK OUT 3
DEAD-TIME CONT IN 4
CT IN 5
RT IN 6
7 GND
COLLECTOR-1 OUT 8
16 ERROR AMP-2(+) IN
15 ERROR AMP-2(−) IN
14 REF 5V REG OUT
13 OUTPUT CONT. IN
Vcc (+7 to +40V) 12
11 COLLECTOR-2 OUT
10 EMITTER-2 OUT
9 EMITTER-1 OUT

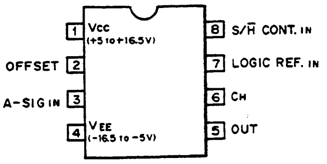

5 6
CT RT
4 DEAD
1 IN1(+)
2 IN1(−)
16 IN2(+)
15 IN2(−)
13 CONT
C1 8
E1 9
C2 11
E2 10
FB 3
REF 5V
14

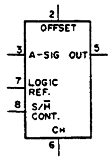
OUTPUT CONTROL	OUTPUT FUNCTION
0	PARALLEL
1	PUSH-PULL

0 ; GROUNDED
1 ; CONNECTED TO PIN 14


ERROR AMP-1
ERROR AMP-2
FEEDBACK
PWM COMPARATOR
FLIP-FLOP
OSC
0.1V
6 RT
5 CT
4 DEAD-TIME CONTROL
13 OUTPUT CONTROL
14 5V REF REG
LOGIC
ERROR AMP
5V REF REG
12 Vcc
8 C1
9 E1
11 C2
10 E2

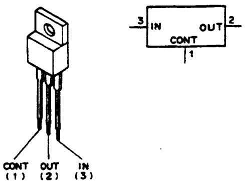
LF398J (NS)
LF398N (NS)
uPC398C (NEC)
uPC649C (NEC)
SAMPLE AND HOLD CIRCUIT
— TOP VIEW —


1 Vcc (+5 to +16.5V)
OFFSET 2
A-SIG IN 3
4 VEE (-16.5 to -5V)
8 S/H̄ CONT. IN
7 LOGIC REF. IN
6 CH
5 OUT

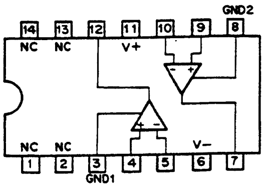

2
OFFSET
3
A-SIG
OUT
5
7
LOGIC REF.
8
S/H̄ CONT.
CH
6

S/H̄ CONT. ; SAMPLE/ HOLD CONTROL
CH ; EXTERNAL HOLD CAPACITOR

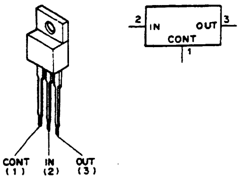
LM317T (NSC)
3-TERMINAL ADJUSTABLE REGULATOR


3
IN
OUT
2
CONT
1
CONT (1)
OUT (2)
IN (3)

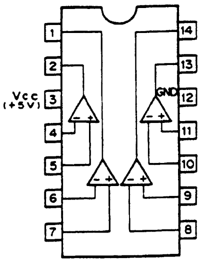
LM319N (NS)
uPC319G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —


GND2
14
13
12
11
10
9
8
NC
NC
V+
NC
NC
V−
1
2
3
4
5
6
7
GND1

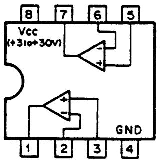
LM337T (NSC)
3-TERMINAL ADJUSTABLE REGULATOR NEGATIVE


2
IN
OUT
3
CONT
1
CONT (1)
IN (2)
OUT (3)

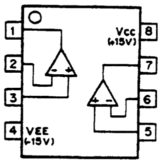
LM339 (NSC)
MB4204 (FUJITSU)
uPC339C (NEC)
uPC339G2 (NEC) FLAT PACKAGE
COMPARATOR
— TOP VIEW —


1
2
Vcc (+5V) 3
4
5
6
7
14
13
GND 12
11
10
9
8

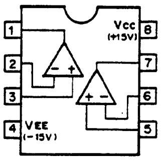
LM358JG (TI)
LM358P (TI)
uPC358C (NEC)
uPC358G (NEC) FLAT PACKAGE
uPC358G2 (NEC) FLAT PACKAGE
DUAL OPERATIONAL AMPLIFIERS
— TOP VIEW —


8
7
6
5
Vcc (+3 to +30V)
GND
1
2
3
4

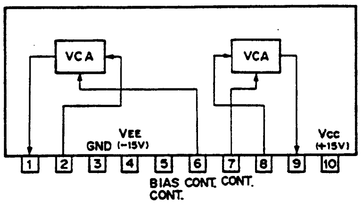
M5220P
NJM2043D-D (JRC)
NJM2043M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


1
2
3
4
VEE (-15V)
Vcc (+15V)
8
7
6
5

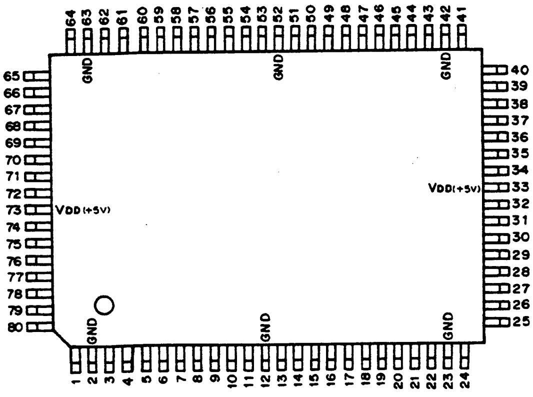
M5238P (MITSUBISHI)
TL072ACP (TI)
TL072BCP (TI)
TL072CP (TI)
TL072CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(LOW-NOISE, JFET-INPUT)
— TOP VIEW —


1
2
3
4
VEE (−15V)
Vcc (+15V)
8
7
6
5

M5241L (MITSUBISHI)
VOLTAGE CONTROLLED AMPLIFIER
— PRINTED SIDE VIEW —


VCA
VCA
GND
VEE (−15V)
Vcc (+15V)
1
2
3
4
5
6
7
8
9
10
BIAS CONT.
CONT.
CONT.

MB671131 (FUJITSU) FLAT PACKAGE
C-MOS INTERFACE FOR MICROPROCESSOR
— TOP VIEW —


GND
VDD(+5V)
VDD(+5V)
1 … 80

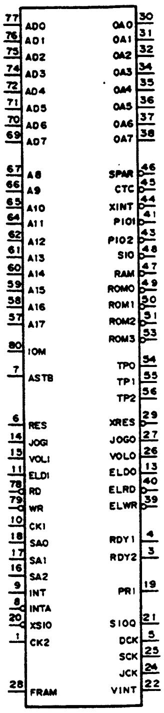
PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	I	CK2	21	O	SIOQ	41	O	PIO1	61	I	A13
2	–	GND	22	O	VINT	42	–	GND	62	I	A12
3	O	RDY2	23	–	GND	43	O	PIO2	63	–	GND
4	O	RDY1	24	O	JCK	44	O	XINT	64	I	A11
5	O	DCK	25	O	SCK	45	O	CTC	65	I	A10
6	I	RES	26	O	VOLO	46	O	SPAR	66	I	A9
7	I	ASTB	27	O	JOGO	47	O	RAM	67	I	A8
8	I	INTA	28	I	FRAM	48	O	SIO	68	–	NC
9	I	INT	29	O	XRES	49	O	ROMO	69	I	AD7
10	I	CKI	30	O	OAO	50	O	ROM1	70	I	AD6
11	I	ELDI	31	O	OA1	51	O	ROM2	71	I	AD5
12	–	GND	32	O	OA2	52	–	GND	72	I	AD4
13	O	ELDO	33	–	VDD (+5V)	53	O	ROM3	73	–	VDD (+5V)
14	I	JOGI	34	O	OA3	54	O	TPO	74	I	AD3
15	I	VOLI	35	O	OA4	55	O	TP1	75	I	AD2
16	I	SA2	36	O	OA5	56	O	TP2	76	I	AD1
17	I	SA1	37	O	OA6	57	I	A17	77	I	ADO
18	I	SAO	38	O	OA7	58	I	A16	78	I	RD
19	O	PRI	39	O	ELWR	59	I	A15	79	I	WR
20	I	XSIO	40	O	ELRD	60	I	A14	80	I	IOM

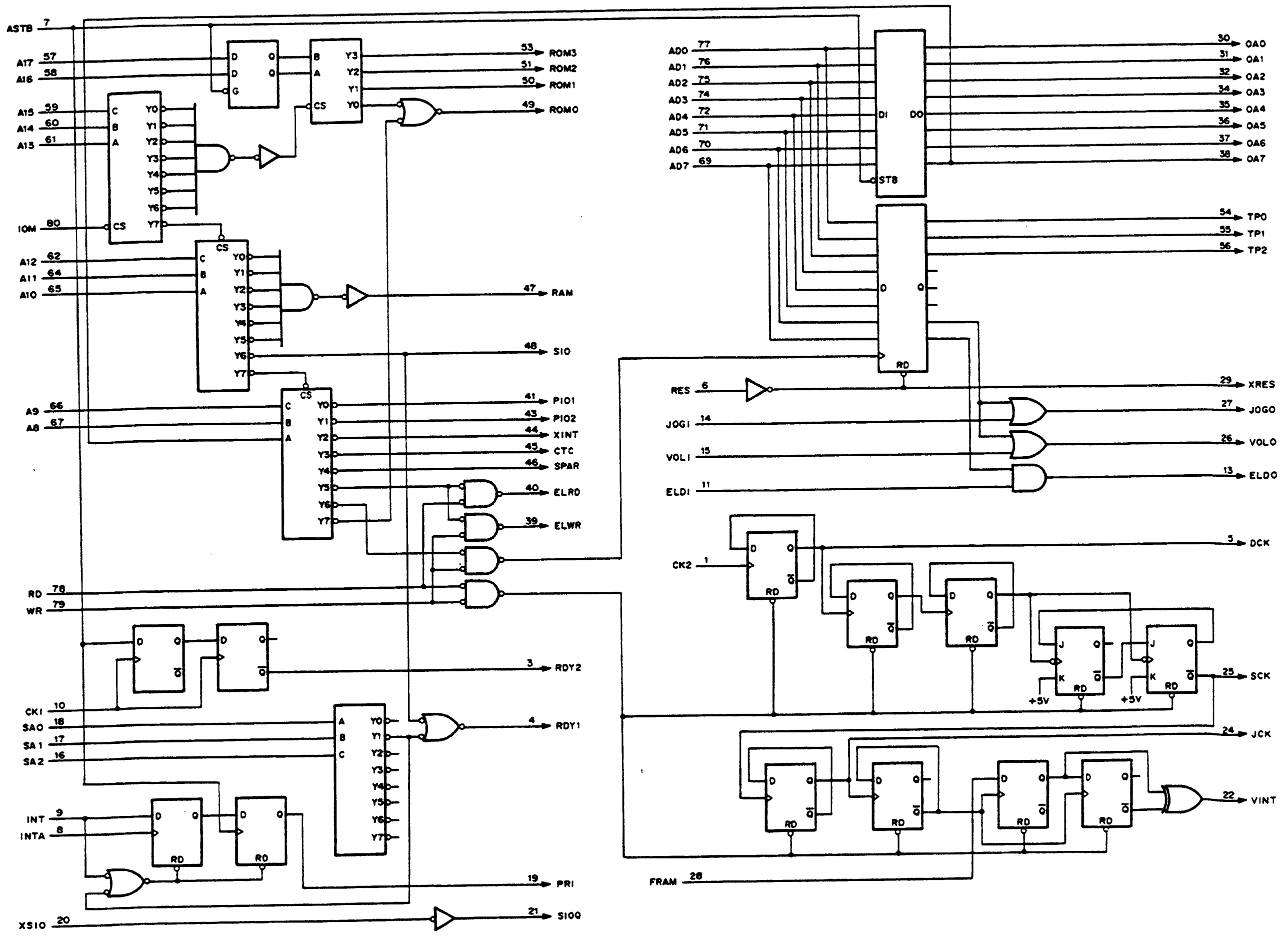
AD0-AD7; ADDRESS/DATA INPUTS
A8-A17; ADDRESS INPUTS
OA0-OA7; ADDRESS OUTPUTS
ROM0-ROM3; PROM SELECT OUTPUTS
SA0-SA2; SLAVE ADDRESS INPUTS
TP0-TP2; TEST TERMINALS

IOM; IO/$\overline{\text{MEMORY}}$ INPUT
ASTB; ADDRESS STROBE INPUT
RES; RESET PULSE INPUT
JOGI; JOG DIAL PULSE INPUT
VOLI; ROTARY ENCODER PULSE INPUT
ELDI; DISPLAY DATA INPUT
RD; READ STROBE INPUT
WR; WRITE STROBE OUTPUT
CKI; SYSTEM CLOCK INPUT
INT; MASKABLE INTERRUPT INPUT
INTA; INTERRUPT ACKNOWLEGE INPUT
XSIO; MPSC INTERRUPT REQUEST INPUT
CK2; 29MHz CLOCK INPUT
FRAM; FRAME PULSE INPUT

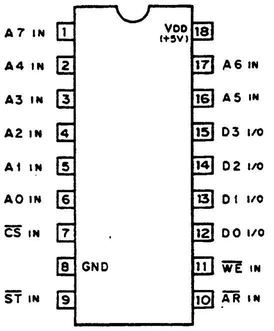
SPAR; SPARE
CTC; PROGRAMMABLE TIMER COUNTER ENABLE OUTPUT
XINT; INTERRUPT CONTROL UNIT ENABLE OUTPUT
PIO1,PIO2; DATA BUS BUFFER ENABLE OUTPUTS
SIO; MULTI-PROTOCOL SERIAL CONTROLLER ENABLE OUTPUT
RAM; RAM CHIP ENABLE OUTPUT
XRES; RESET PULSE OUTPUT
JOGO; JOG DIAL PULSE OUTPUT
VOLO; ROTARY ENCODER PULSE OUTPUT
ELDO; DISPLAY DATA OUTPUT
ELRD; READ STROBE OUTPUT
ELWR; WRITE STROBE OUTPUT
RDY1,RDY2; BUS READY OUTPUTS

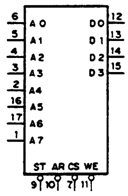
PRI; PRIORITY OUTPUT
SIOQ; MPSC INTERRUPT REQUEST OUTPUT
DCK; DATA TRANSMIT CLOCK OUTPUT (14.7456MHz)
SCK; RECEIVE/TRANSMIT CLOCK OUTPUT (1.2MHz)
JCK; CLOCK OUTPUT (614KHz)
VINT; INTERRUPT REQUEST OUTPUT


77 ADO
76 AD1
73 AD2
74 AD3
72 AD4
71 AD5
70 AD6
69 AD7
67 A8
66 A9
65 A10
64 A11
62 A12
61 A13
60 A14
59 A15
58 A16
57 A17
80 IOM
7 ASTB
6 RES
14 JOGI
15 VOLI
11 ELDI
78 RD
79 WR
10 CKI
18 SAO
17 SA1
16 SA2
9 INT
8 INTA
20 XSIO
1 CK2
28 FRAM
OAO 30
OA1 31
OA2 32
OA3 34
OA4 35
OA5 36
OA6 37
OA7 38
SPAR 46
CTC 45
XINT 44
PIO1 41
PIO2 43
SIO 48
RAM 47
ROMO 49
ROM1 50
ROM2 51
ROM3 53
TPO 54
TP1 55
TP2 56
XRES 29
JOGO 27
VOLO 26
ELDO 13
ELRD 40
ELWR 39
RDY1 4
RDY2 3
PRI 19
SIOQ 21
DCK 5
SCK 25
JCK 24
VINT 22

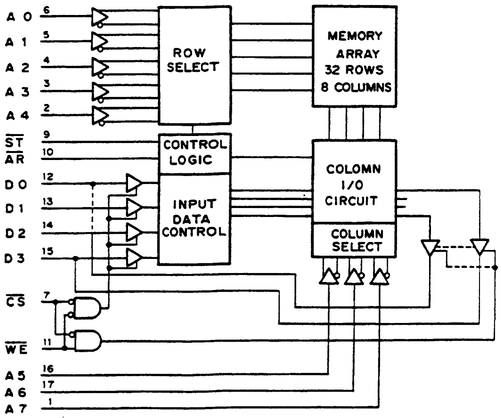

ASTB 7
A17 57
A16 58
A15 59
A14 60
A13 61
IOM 80
A12 62
A11 64
A10 65
A9 66
A8 67
RD 78
WR 79
CKI 10
SAO 18
SA1 17
SA2 16
INT 9
INTA 8
XSIO 20
53 ROM3
51 ROM2
50 ROM1
49 ROMO
47 RAM
48 SIO
41 PIO1
43 PIO2
44 XINT
45 CTC
46 SPAR
40 ELRD
39 ELWR
3 RDY2
4 RDY1
19 PRI
21 SIOQ
ADO 77
AD1 76
AD2 75
AD3 74
AD4 72
AD5 71
AD6 70
AD7 69
STB
30 OAO
31 OA1
32 OA2
34 OA3
35 OA4
36 OA5
37 OA6
38 OA7
54 TPO
55 TP1
56 TP2
RES 6
JOGI 14
VOLI 15
ELDI 11
29 XRES
27 JOGO
26 VOLO
13 ELDO
CK2 1
5 DCK
25 SCK
24 JCK
22 VINT
FRAM 28
+5V
D Q RD J K
CS Y0 Y1 Y2 Y3 Y4 Y5 Y6 Y7
A B C G

MBM2212-20 (FUJITSU) (ACCESS TIME = 200nS)
MBM2212-20P (FUJITSU) (ACCESS TIME = 200nS)
MBM2212-25 (FUJITSU) (ACCESS TIME = 250nS)
X2212P (XICOR) (ACCESS TIME = 300nS)
N-MOS 1024 (256x4)-BIT NONVOLATILE STATIC RAM
— TOP VIEW —


A7 IN 1
A4 IN 2
A3 IN 3
A2 IN 4
A1 IN 5
AO IN 6
CS IN 7
8 GND
ST IN 9
VDD (+5V) 18
17 A6 IN
16 A5 IN
15 D3 I/O
14 D2 I/O
13 D1 I/O
12 DO I/O
11 WE IN
10 AR IN


6 A O
5 A1
4 A2
3 A3
2 A4
16 A5
17 A6
1 A7
DO 12
D1 13
D2 14
D3 15
ST AR CS WE
9 10 7 11

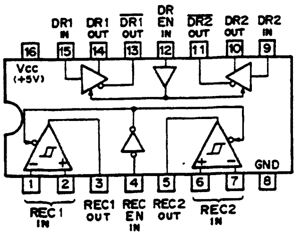
AO - A7 ; ADDRESS INPUTS
AR ; ARRAY RECALL
CS ; CHIP SELECT
DO - D3 ; DATA INPUT/OUTPUT
ST ; STORE
WE ; WRITE ENABLE


A 0 6
A 1 5
A 2 4
A 3 3
A 4 2
ST 9
AR 10
D O 12
D 1 13
D 2 14
D 3 15
CS 7
WE 11
A5 16
A6 17
A7 1
ROW SELECT
MEMORY ARRAY 32 ROWS 8 COLUMNS
CONTROL LOGIC
INPUT DATA CONTROL
COLOMN I/O CIRCUIT
COLUMN SELECT

INPUTS				I/O	MODE
$\overline{CS}$	$\overline{WE}$	$\overline{AR}$	$\overline{ST}$		
1	X	1	1	HI-Z	NOT SELECTED
0	1	1	1	OUTPUT DATA	RAM READ
0	0	1	1	INPUT DATA 1	RAM WRITE "1"
0	0	1	1	INPUT DATA 0	RAM WRITE "0"
X	1	0	1	HI-Z	ARRAY RECALL
1	X	0	1	HI-Z	ARRAY RECALL
X	1	1	0	HI-Z	NONVOLATILE STORING
1	X	1	0	HI-Z	NONVOLATILE STORING

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

MC34050P (MOTOROLA)
RS-422 LINE DRIVER/RECEIVER
— TOP VIEW —


DR1 IN
DR1 OUT
DR1 OUT
DR EN IN
DR2 OUT
DR2 OUT
DR2 IN
16 15 14 13 12 11 10 9
Vcc (+5V)
GND
1 2 3 4 5 6 7 8
REC1 IN
REC1 OUT
REC EN IN
REC2 OUT
REC2 IN

DRIVER

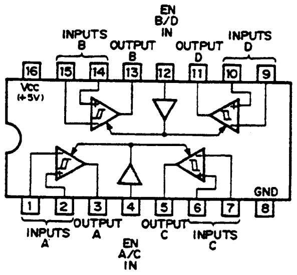
DR IN	EN	DR OUT	$\overline{DR}$ OUT
0	1	0	1
1	1	1	0
X	0	HI-Z	HI-Z

RECEIVER

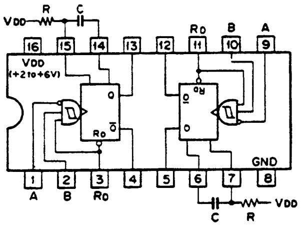
REC IN	EN	RECOUT
>+0.2V DIFF	0	1
<-0.2V DIFF	0	0
X	1	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

MC3486P (MOTOROLA)
RS-422/423 LINE RECEIVER WITH 3-STATE OUTPUTS
— TOP VIEW —


INPUTS B
OUTPUT B
EN B/D IN
OUTPUT D
INPUTS D
16 15 14 13 12 11 10 9
Vcc (+5V)
GND
1 2 3 4 5 6 7 8
INPUTS A
OUTPUT A
EN A/C IN
OUTPUT C
INPUTS C

MC74HC221N (MOTOROLA)
TC74HC221F (TOSHIBA) FLAT PACKAGE
TC74HC221P (TOSHIBA)
uPD74HC221AC (NEC)
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

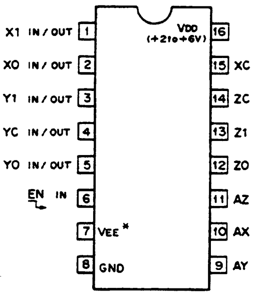

VDD
R
C
RD
B
A
16 15 14 13 12 11 10 9
VDD (+2 to +6V)
Q
$\overline{Q}$
RD
GND
1 2 3 4 5 6 7 8
A
B
RD
C
R
VDD

INPUTS			OUTPUTS	
RD	A	B	Q	$\overline{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⎍	⊔
1	↓	1	⎍	⊔
↑	0	1	⎍	⊔

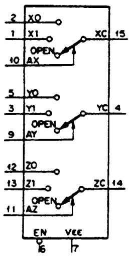
0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

MC74HC4053F (MOTOROLA) FLAT PACKAGE
MC74HC4053N (MOTOROLA)
TC74HC4053P (TOSHIBA)
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —


X1 IN / OUT 1
XO IN / OUT 2
Y1 IN / OUT 3
YC IN / OUT 4
YO IN / OUT 5
EN IN 6
7 VEE *
8 GND
VDD (+2 to +6V) 16
15 XC IN / OUT
14 ZC IN / OUT
13 Z1 IN / OUT
12 ZO IN / OUT
11 AZ IN / OUT
10 AX IN / OUT
9 AY IN / OUT

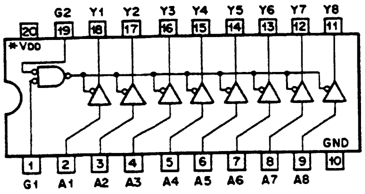
VEE * ; VDD−VEE : +3 to +12V
VEE ≦ GND

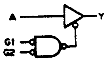

2 XO
1 X1
XC 15
OPEN
10 AX
5 YO
3 Y1
YC 4
OPEN
9 AY
12 ZO
13 Z1
ZC 14
OPEN
11 AZ
EN
VEE
6
7

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

CONT. INPUTS		ON CHANNEL
EN	A (X,Y,Z)	
0	0	0
0	1	1
1	X	OPEN

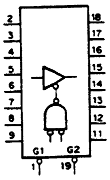
MC74HC541N (MOTOROLA)
MC74HCT541F (TI) FLAT PACKAGE
SN74HC541N (TI)
SN74HCT541NS (TI) FLAT PACKAGE
TC74HC541P (TOSHIBA)
C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS
— TOP VIEW —


G2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
20 19 18 17 16 15 14 13 12 11
*VDD
GND
1 2 3 4 5 6 7 8 9 10
G1 A1 A2 A3 A4 A5 A6 A7 A8



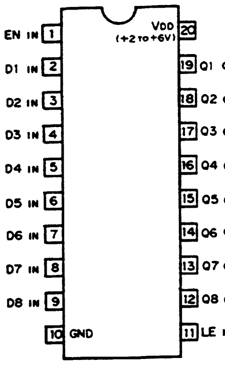
G1	G2	A	Y
0	0	0	0
0	0	1	1
1	X	X	HI-Z
X	1	X	HI-Z

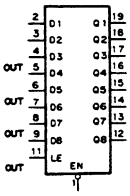
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE


2 3 4 5 6 7 8 9
18 17 16 15 14 13 12 11
G1 G2
1 19

* VDD HC ; +2 to +6V
HTC ; +5V

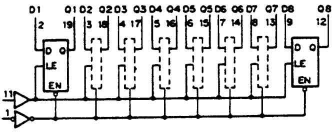
MC74HC573N (MOTOROLA)
SN74HC573N (TI)
TC74HC573F (TOSHIBA) FLAT PACKAGE
TC74HC573P (TOSHIBA)
C-MOS 3-STATE OUTPUTS OCTAL LATCHES
— TOP VIEW —


EN IN 1
D1 IN 2
D2 IN 3
D3 IN 4
D4 IN 5
D5 IN 6
D6 IN 7
D7 IN 8
D8 IN 9
10 GND
VDD (+2 to +6V) 20
19 Q1 OUT
18 Q2 OUT
17 Q3 OUT
16 Q4 OUT
15 Q5 OUT
14 Q6 OUT
13 Q7 OUT
12 Q8 OUT
11 LE IN

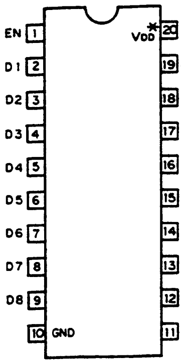

D1 D2 D3 D4 D5 D6 D7 D8
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
LE
EN

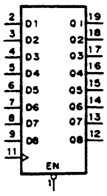
INPUTS			OUT
EN	LE	D	Q
0	1	1	1
0	1	0	0
0	0	X	Qo
1	X	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE


D1 Q1 D2 Q2 D3 Q3 D4 Q4 D5 Q5 D6 Q6 D7 Q7 D8 Q8
D Q
LE
EN
LE
EN

MC74HC574N (MOTOROLA)
MSM74HC574RS (OKI)
SN74HC574N (TI)
SN74HCT574N (TI)
TC74HC574F (TOSHIBA) FLAT PACKAGE
TC74HC574P (TOSHIBA)
TC74HCT574P (TOSHIBA)
uPD74HC574C (NEC)
C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
— TOP VIEW —

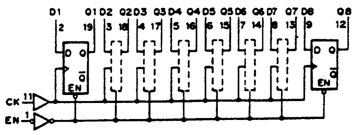

EN 1
D1 2
D2 3
D3 4
D4 5
D5 6
D6 7
D7 8
D8 9
10 GND
*VDD 20
19 Q1
18 Q2
17 Q3
16 Q4
15 Q5
14 Q6
13 Q7
12 Q8
11 CK


D1 D2 D3 D4 D5 D6 D7 D8
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
EN

EACH FLIP-FLOP

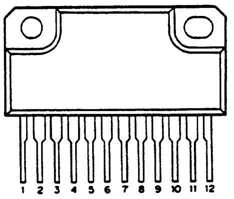
INPUTS			OUT
EN	CK	D	Q
0	↑	1	1
0	↑	0	0
0	0	X	Qo
1	X	X	HI-Z

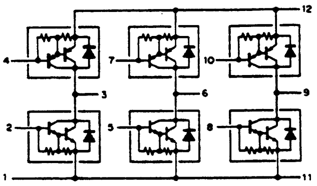
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE


D1 Q1 D2 Q2 D3 Q3 D4 Q4 D5 Q5 D6 Q6 D7 Q7 D8 Q8
D Q
EN
CK
EN

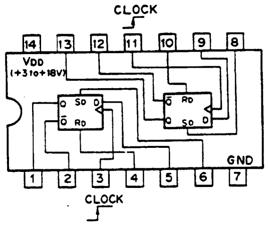
* VDD HC ; +2 to +6V
HCT ; +5V

MP6901 (TOSHIBA)
POWER TRANSISTOR ARRAY
— PRINTED SIDE VIEW —


1 2 3 4 5 6 7 8 9 10 11 12


12
4
7
10
3
6
9
2
5
8
1
11

MSM4013RS (OKI)
TC4013BF (TOSHIBA) FLAT PACKAGE
TC4013BP (TOSHIBA)
TC5040138F (TOSHIBA) FLAT PACKAGE
TC504013BP (TOSHIBA)
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —


CLOCK
14 13 12 11 10 9 8
VDD (+3 to +18V)
SD
RD
GND
1 2 3 4 5 6 7
CLOCK

DIRECT R-S FLIP FLOP

SD	RD	Q	$\overline{Q}$
0	0	Qn	$\overline{Q}$n
0	1	0	1
1	0	1	0
1	1	0	1

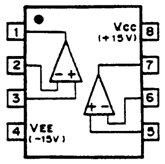
D-TYPE FLIP FLOP

CKn	CKn+1
D	Q
0	0
1	1

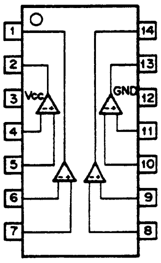
CLOCK CK ; ↑
CKn ; BEFORE CLOCK
CKn+1 ; AFTER CLOCK

0 ; LOW LEVEL
1 ; HIGH LEVEL

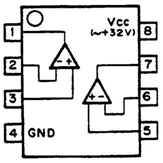
NJM082D (JRC)
NJM082M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —


1 2 3 4
8 7 6 5
Vcc (+15V)
VEE (-15V)

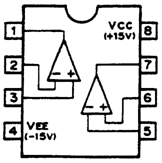
NJM2901N (JRC)
SINGLE SUPPLY COMPARATOR
— TOP VIEW —


1 2 3 4 5 6 7
14 13 12 11 10 9 8
Vcc
GND

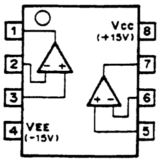
NJM2904D (JRC)
NJM4556D (JRC)
NJM4556M (JRC) FLAT PACKAGE
NJM4556M-A (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


1 2 3 4
8 7 6 5
Vcc (~+32V)
GND

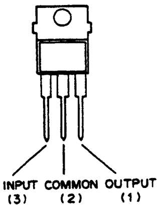
NJM4559D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —


1 2 3 4
8 7 6 5
Vcc (+15V)
VEE (-15V)

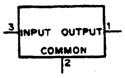
NJM4560D (JRC)
NJM4560DD (JRC)
NJM4560DN (JRC)
NJM4560DX (JRC)
NJM4560M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


1 2 3 4
8 7 6 5
Vcc (+15V)
VEE (-15V)

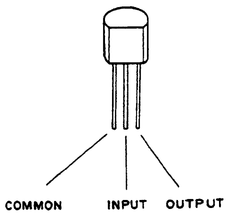
NJM78M ? ?A (JRC)
POSITIVE VOLTAGE REGULATOR (500mA)
— FRONT VIEW —


INPUT
(3)
COMMON
(2)
OUTPUT
(1)

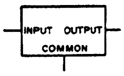
5V	NJM78M05A
6V	NJM78M06A
8V	NJM78M08A
9V	NJM78M09A
12V	NJM78M12A
15V	NJM78M15A
18V	NJM78M18A
20V	NJM78M20A
24V	NJM78M24A


3
INPUT
OUTPUT
1
COMMON
2

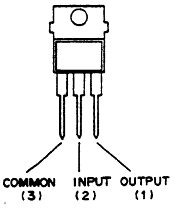
NJM79L ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (100mA)
— FRONT VIEW —


COMMON
INPUT
OUTPUT

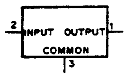
OUTPUT VOLTAGE	NJM79L??A
−3V	NJM79L03A
−4V	
−5V	NJM79L05A
−6V	NJM79L06A
−7V	
−8V	NJM79L08A
−9V	NJM79L09A
−10V	
−12V	NJM79L12A
−15V	NJM79L15A
−18V	NJM79L18A
−20V	
−24V	NJM79L24A


INPUT
OUTPUT
COMMON

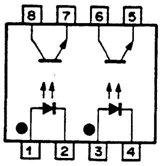
NJM79M ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (500mA)
— FRONT VIEW —


COMMON
(3)
INPUT
(2)
OUTPUT
(1)

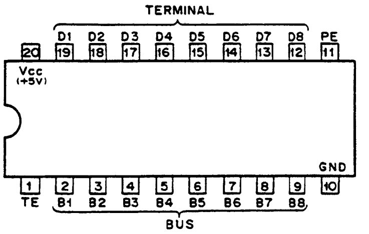
−5V	NJM79M05A
−6V	NJM79M06A
−8V	NJM79M08A
−9V	NJM79M09A
−12V	NJM79M12A
−15V	NJM79M15A
−18V	NJM79M18A
−24V	NJM79M24A

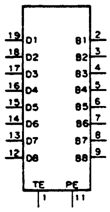

2
INPUT
OUTPUT
1
COMMON
3

PC627 (SHARP)
TTL-PHOTOELECTRIC CELL
— TOP VIEW —



SN75160AN (TI)
SN75160AN-R (TI)
SN75160N (TI)
OCTAL GENERAL-PURPOSE INTERFACE BUS TRANSCEIVERS
— TOP VIEW —


TERMINAL
D1
D2
D3
D4
D5
D6
D7
D8
PE
20
19
18
17
16
15
14
13
12
11
Vcc
(+5V)
GND
1
2
3
4
5
6
7
8
9
10
TE
B1
B2
B3
B4
B5
B6
B7
B8
BUS


19 D1
18 D2
17 D3
16 D4
15 D5
14 D6
13 D7
12 D8
B1 2
B2 3
B3 4
B4 5
B5 6
B6 7
B7 8
B8 9
TE 1
PE 11

TE; TALK ENABLE
PE; PULL-UP ENABLE

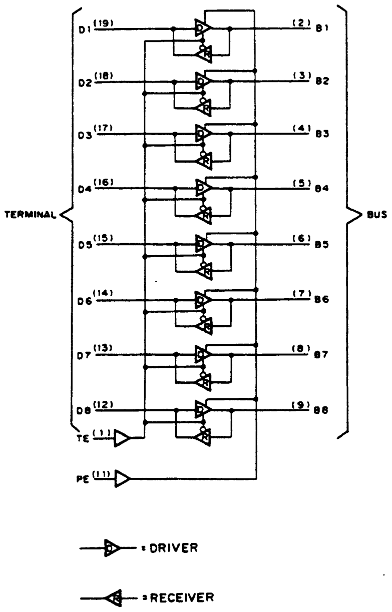
DRIVERS

INPUTS			OUTPUT
D	TE	PE	B
1	1	1	1
0	1	X	0
1	X	0	Z
X	0	X	Z

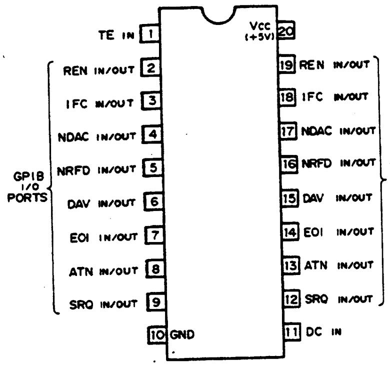
RECEIVERS

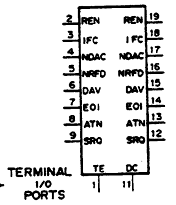
INPUTS			OUTPUT
B	TE	PE	D
0	0	X	0
1	0	X	1
X	1	X	Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
Z; HIGH IMPEDANCE


D1 (19)
(2) B1
D2 (18)
(3) B2
D3 (17)
(4) B3
D4 (16)
(5) B4
D5 (15)
(6) B5
D6 (14)
(7) B6
D7 (13)
(8) B7
D8 (12)
(9) B8
TERMINAL
BUS
TE (1)
PE (11)
= DRIVER
= RECEIVER

SN75161AN (TI)
INTERFACE BUS TRANSCEIVERS
— TOP VIEW —


TE IN 1
REN IN/OUT 2
IFC IN/OUT 3
NDAC IN/OUT 4
NRFD IN/OUT 5
DAV IN/OUT 6
EOI IN/OUT 7
ATN IN/OUT 8
SRQ IN/OUT 9
10 GND
GPIB I/O PORTS
Vcc (+5V) 20
19 REN IN/OUT
18 IFC IN/OUT
17 NDAC IN/OUT
16 NRFD IN/OUT
15 DAV IN/OUT
14 EOI IN/OUT
13 ATN IN/OUT
12 SRQ IN/OUT
11 DC IN


2 REN REN 19
3 IFC IFC 18
4 NDAC NDAC 17
5 NRFD NRFD 16
6 DAV DAV 15
7 EOI EOI 14
8 ATN ATN 13
9 SRQ SRQ 12
TE 1
DC 11
TERMINAL I/O PORTS

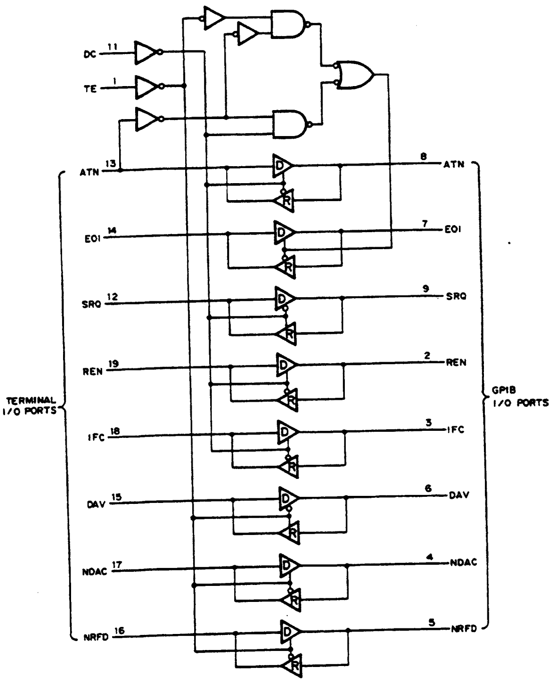
DC; DIRECTION CONTROL
TE; TALK ENABLE
ATN; ATTENTION
SRQ; SERVICE REQUEST
REN; REMOTE ENABLE
IFC; INTERFACE CLEAR
EOI; END OR IDENTIFY
DAV; DATA VALID
NDAC; NOT DATA ACCEPTED
NRFD; NOT READY FOR DATA

RECEIVE/TRANSMIT FUNCTION TABLE

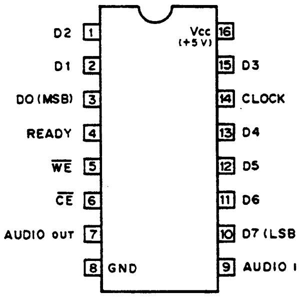
CONTROLS			BUS-MANAGEMENT CHANNELS					DATA-TRANSFER CHANNELS		
			CONTROLLED BY DC					CONTROLLED BY TE		
DC	TE	ATN	ATN	SRQ	REN	IFC	EOI	DAV	NDAC	NRFD
1	1	1	R	T	R	R	T	T	R	R
1	1	0					R			
0	0	1	T	R	T	T	R	R	T	T
0	0	0					T			
1	0	X	R	T	R	R	R	R	T	T
0	1	X	T	R	T	T	T	T	R	R

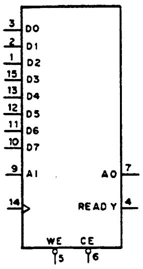
0; LOW LEVEL
1; HIGH LEVEL
X; DONT CARE

R; RECEIVE (TERMINAL ← GPIB)
T; TRANSMIT (TERMINAL → GPIB)


DC 11
TE 1
ATN 13
8 ATN
EOI 14
7 EOI
SRQ 12
9 SRQ
REN 19
2 REN
IFC 18
3 IFC
DAV 15
6 DAV
NDAC 17
4 NDAC
NRFD 16
5 NRFD
TERMINAL I/O PORTS
GPIB I/O PORTS
D
R

SN76489AN (TI)
IIL PROGRAMMABLE SOUND GENERATION CONTROLLER
— TOP VIEW —

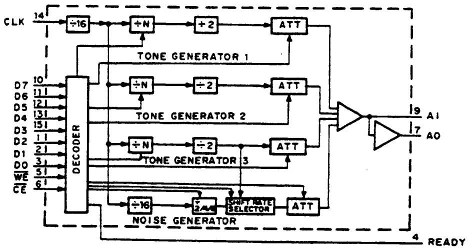

D2 1
D1 2
D0 (MSB) 3
READY 4
WE 5
CE 6
AUDIO OUT 7
8 GND
Vcc (+5 V) 16
15 D3
14 CLOCK
13 D4
12 D5
11 D6
10 D7 (LSB)
9 AUDIO IN


3 D0
2 D1
1 D2
15 D3
13 D4
12 D5
11 D6
10 D7
9 AI
14
AO 7
READY 4
WE 5
CE 6

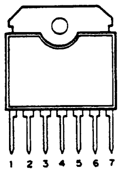
CE: CHIP ENABLE
WE: WRITE ENABLE
AI: AUDIO INPUT
AO: AUDIO OUTPUT

CE	WE	READY
1	X	1
0	1	0
0	0	0 (DURING 32 CLOCKES INPUT) → 1

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

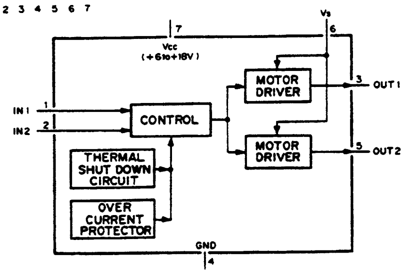

CLK 14
÷16
÷N
÷2
ATT
TONE GENERATOR 1
TONE GENERATOR 2
TONE GENERATOR 3
NOISE GENERATOR
SHIFT RATE SELECTOR
DECODER
D7 10
D6 11
D5 12
D4 13
D3 15
D2 1
D1 2
D0 3
WE 5
CE 6
9 AI
7 AO
4 READY

TA7257P (TOSHIBA)
FULL-BRIDGE DRIVER FOR DC MOTOR (H-SWITCH)
— PRINTED SIDE VIEW —

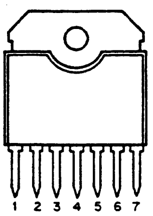


IN1	IN2	OUT1	OUT2	MODE
1	1	0	0	BRAKE
0	1	0	1	FORWARD/REVERSE
1	0	1	0	REVERSE/FORWARD
0	0	HI-Z		STOP

0; LOW LEVEL
1; HIGH LEVEL
HI-Z; HIGH INPEDANCE

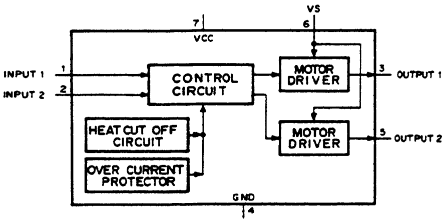

7
Vcc (+6to+18V)
Vs
6
IN1 1
IN2 2
CONTROL
MOTOR DRIVER
MOTOR DRIVER
3 OUT1
5 OUT2
THERMAL SHUT DOWN CIRCUIT
OVER CURRENT PROTECTOR
GND
4

TA7267P (TOSHIBA)
DC MOTOR DRIVER
— PRINTED SIDE VIEW —

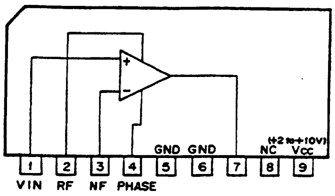


INPUTS 1	INPUTS 2	OUTPUTS 1	OUTPUTS 2	MODE
1	1	0	0	BRAKE
0	1	0	1	ROTATION/ REV. ROTATION
1	0	1	0	REV. ROTATION / ROTATION
0	0	HI-Z		STOP

0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE

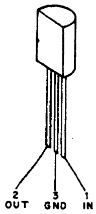

VS
7
VCC
6
INPUT 1
INPUT 2
1
2
CONTROL CIRCUIT
MOTOR DRIVER
3
OUTPUT 1
HEAT CUT OFF CIRCUIT
MOTOR DRIVER
5
OUTPUT 2
OVER CURRENT PROTECTOR
GND
4

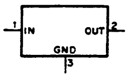
TA7368P (TOSHIBA)
LOW FREQUENCY POWER AMPLIFIER
— PRINTED SIDE —


+
−
GND GND
(+2 to +10V)
NC Vcc
1 2 3 4 5 6 7 8 9
VIN RF NF PHASE

RF ; RIPPLE FILTER
NF ; NEGATIVE FEEDBACK

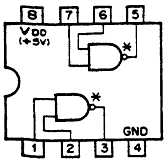
TA78L ? ? ?AP (TOSHIBA)
POSITIVE VOLTAGE REGULATOR (150mA)

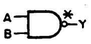

2
OUT
3
GND
1
IN


1
IN
OUT
2
GND
3

OUTPUT VOLTAGE	???
+5V	005
+6V	006
+7V	007
+7.5V	075
+8V	008
+9V	009
+10V	010
+12V	012
+13.2V	132
+15V	015
+18V	018
+20V	020
+24V	024

TC40107BP (TOSHIBA)
C-MOS NAND BUFFER/DRIVER WITH OPEN-DRAIN
— TOP VIEW —

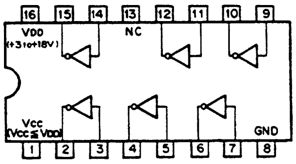

8 7 6 5
VDD
(+5V)
*
*
GND
1 2 3 4



A	B	Y
0	0	HI-Z
0	1	HI-Z
1	0	HI-Z
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE
* ; OPEN-DRAIN

TC5020BP (TOSHIBA)
C-MOS LOW-TO-HIGH VOLTAGE TRANSLATION INVERTER
— TOP VIEW —

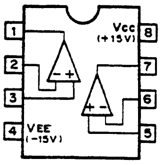

16 15 14 13 12 11 10 9
VDD
(+3 to +18V)
NC
Vcc
(Vcc≦VDD)
GND
1 2 3 4 5 6 7 8

$Y = \overline{A}$

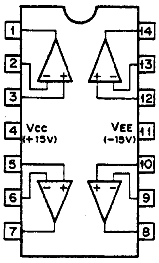
A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

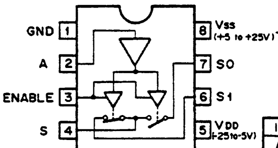
TL082ACP (TI)
TL082BCP (TI)
TL082CP (TI)
TL082CPS (TI) FLAT PACKAGE
uPC4082C (NEC)
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —

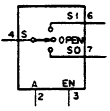

1
2
3
4
Vcc
(+15V)
8
7
6
5
VEE
(−15V)
−
+

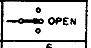
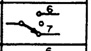
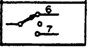
TL084ACN (TI)
TL084BCN (TI)
TL084CN (TI)
TL084CNS (TI) FLAT PACKAGE
uPC4084C (NEC)
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —


1
2
3
4
5
6
7
14
13
12
11
10
9
8
Vcc
(+15V)
VEE
(−15V)
−
+

SN72607P (TI)
TL607CP (TI)
TL607CPS (TI) FLAT PACKAGE
P-MOS ANALOG SWITCH
— TOP VIEW —

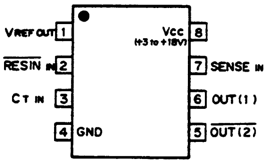

GND 1
A 2
ENABLE 3
S 4
8 Vss
(+5 to +25V)
7 SO
6 S1
5 VDD
(+25 to −5V)

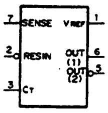

S1
6
4
S
OPEN
SO
7
A
EN
2
3

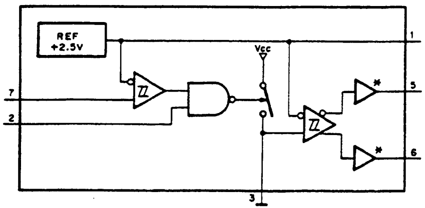
INPUTS A	INPUTS EN	SW
X	0	 OPEN
0	1	
1	1	

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

TL7705ACP (TI)
TL7705CP (TI)
POWER VOLTAGE SUPERVISOR
— TOP VIEW —

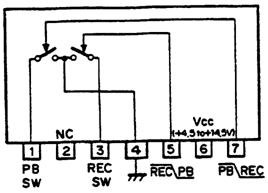

VREF OUT 1
$\overline{\text{RESIN}}$ IN 2
CT IN 3
4 GND
Vcc
(+3 to +18V)
8
7 SENSE IN
6 OUT(1)
5 $\overline{\text{OUT(2)}}$


7
SENSE
VREF
1
2
RESIN
OUT (1)
6
OUT (2)
5
3
CT

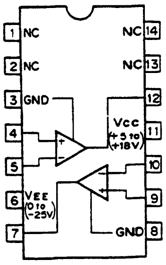

REF
+2.5V
Vcc
1
7
2
*
5
*
6
3

* OPEN COLLECTOR

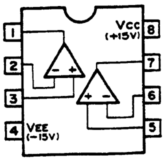
uPC1513HA (NEC)
AUDIO HEAD SELECT SWITCH
— PRINTED SIDE VIEW —


NC
Vcc
(+4.5 to +14.5V)
1
2
3
4
5
6
7
PB
SW
REC
SW
REC\PB
PB\REC

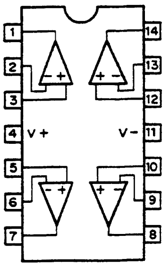
uPC272C (NEC)
uPC319C (NEC)
DUAL VOLTAGE COMPARATOR
— TOP VIEW —


1 NC
2 NC
3 GND
4
5
6 VEE (0 to -25V)
7
14 NC
13 NC
12
11 Vcc (+5 to +18V)
10
9
8 GND

uPC4556C (NEC)
OPERATIONAL AMPLIFIER
(WIDE BAND, DECOMPENSATED)
— TOP VIEW —

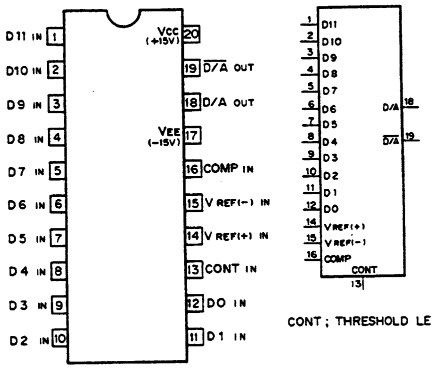

1
2
3
4 VEE (-15V)
8 Vcc (+15V)
7
6
5

uPC458C (NEC)
uPC4741G (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

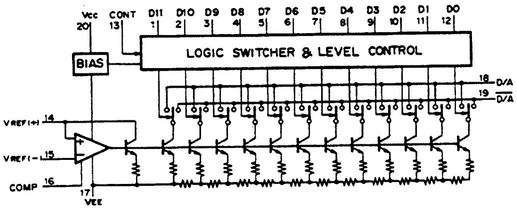

1
2
3
4 V+
5
6
7
14
13
12
11 V-
10
9
8

4V≦(V+)-(V-)≦40V

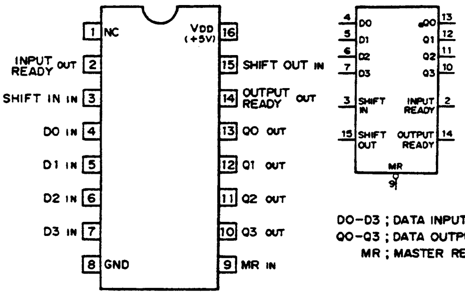
uPC648C (NEC)
uPC648D (NEC)
12-BIT D/A CONVERTER WITH OPEN COLLECTOR OUTPUT
— TOP VIEW —


D11 IN 1
D10 IN 2
D9 IN 3
D8 IN 4
D7 IN 5
D6 IN 6
D5 IN 7
D4 IN 8
D3 IN 9
D2 IN 10
20 Vcc (+15V)
19 D/A OUT
18 D/A OUT
17 VEE (-15V)
16 COMP IN
15 V REF(-) IN
14 V REF(+) IN
13 CONT IN
12 D0 IN
11 D1 IN
1 D11
2 D10
3 D9
4 D8
5 D7
6 D6
7 D5
8 D4
9 D3
10 D2
11 D1
12 D0
14 VREF(+)
15 VREF(-)
16 COMP
CONT 13
D/A 18
D/A 19

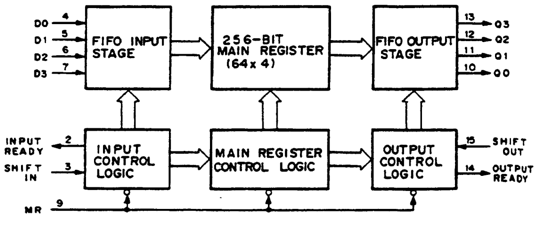
CONT ; THRESHOLD LEVEL CONTROL


Vcc 20
CONT 13
D11 1
D10 2
D9 3
D8 4
D7 5
D6 6
D5 7
D4 8
D3 9
D2 10
D1 11
D0 12
LOGIC SWITCHER & LEVEL CONTROL
BIAS
18 D/A
19 D/A
VREF(+) 14
VREF(-) 15
COMP 16
17 VEE

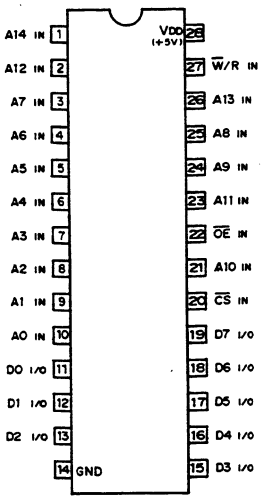
uPD3341C (NEC)
N-MOS 256-BIT (64x4) FIRST-IN FIRST-OUT SERIAL MEMORY
— TOP VIEW —

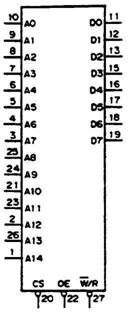

1 NC
INPUT READY OUT 2
SHIFT IN IN 3
D0 IN 4
D1 IN 5
D2 IN 6
D3 IN 7
8 GND
16 VDD (+5V)
15 SHIFT OUT IN
14 OUTPUT READY OUT
13 Q0 OUT
12 Q1 OUT
11 Q2 OUT
10 Q3 OUT
9 MR IN
4 D0
5 D1
6 D2
7 D3
3 SHIFT IN
15 SHIFT OUT
Q0 13
Q1 12
Q2 11
Q3 10
INPUT READY 2
OUTPUT READY 14
MR 9

D0-D3 ; DATA INPUTS
Q0-Q3 ; DATA OUTPUTS
MR ; MASTER RESET INPUT


D0 4
D1 5
D2 6
D3 7
FIFO INPUT STAGE
256-BIT MAIN REGISTER (64x4)
FIFO OUTPUT STAGE
13 Q3
12 Q2
11 Q1
10 Q0
INPUT READY 2
SHIFT IN 3
INPUT CONTROL LOGIC
MAIN REGISTER CONTROL LOGIC
OUTPUT CONTROL LOGIC
15 SHIFT OUT
14 OUTPUT READY
MR 9

uPD43256C-10 (NEC) (ACCESS TIME = 100 nS)
uPD43256C-10L (NEC) (ACCESS TIME = 100 nS)
uPD43256C-12 (NEC) (ACCESS TIME = 120 nS)
uPD43256C-12L (NEC) (ACCESS TIME = 120 nS)
uPD43256C-15 (NEC) (ACCESS TIME = 150 nS)
uPD43256C-15L (NEC) (ACCESS TIME = 150 nS)
C-MOS 262144 (32768x8) BIT STATIC RAM
— TOP VIEW —

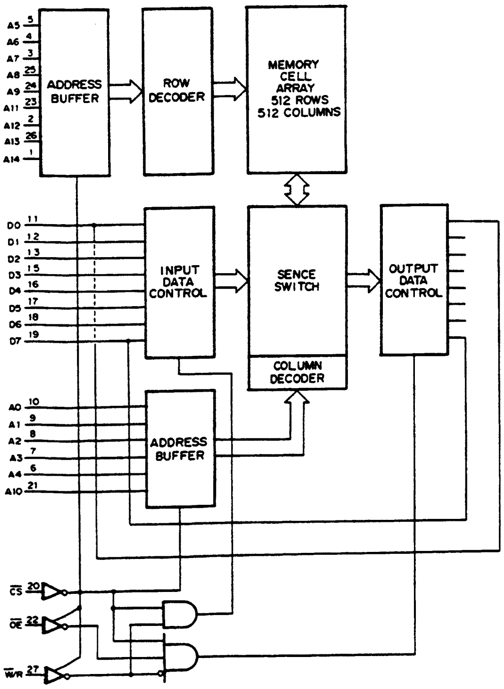

A14 IN 1
A12 IN 2
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10
D0 I/O 11
D1 I/O 12
D2 I/O 13
14 GND
VDD (+5V) 28
27 W/R IN
26 A13 IN
25 A8 IN
24 A9 IN
23 A11 IN
22 OE IN
21 A10 IN
20 CS IN
19 D7 I/O
18 D6 I/O
17 D5 I/O
16 D4 I/O
15 D3 I/O


10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
26 A13
1 A14
D0 11
D1 12
D2 13
D3 15
D4 16
D5 17
D6 18
D7 19
CS 20
OE 22
W/R 27

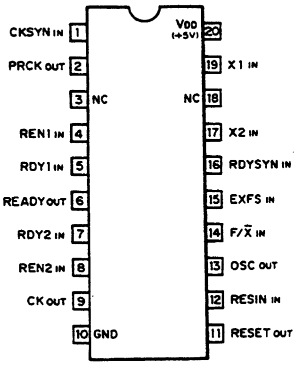
INPUTS			FUNCTION	POWER
CS	OE	W/R		
0	X	0	WRITE	ACTIVE
0	0	1	READ	
0	1	1	DISABLE (OUTPUT=HI-Z)	
1	X	X		STANDBY

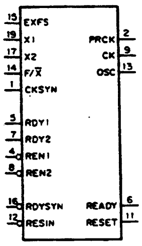
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

A0-A14 ; ADDRESS INPUTS
CS ; CHIP SELECT
D0-D7 ; DATA INPUTS/OUTPUTS
OE ; OUTPUT ENABLE
W/R ; WRITE/READ ENABLE

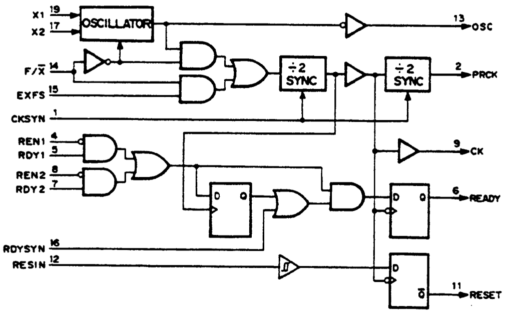

A5 5
A6 4
A7 3
A8 25
A9 24
A11 23
A12 2
A13 26
A14 1
ADDRESS BUFFER
ROW DECODER
MEMORY CELL ARRAY 512 ROWS 512 COLUMNS
D0 11
D1 12
D2 13
D3 15
D4 16
D5 17
D6 18
D7 19
INPUT DATA CONTROL
SENCE SWITCH
OUTPUT DATA CONTROL
COLUMN DECODER
A0 10
A1 9
A2 8
A3 7
A4 6
A10 21
ADDRESS BUFFER
CS 20
OE 22
W/R 27

uPD71011G (NEC) FLAT PACKAGE
C-MOS CLOCK PULSE GENERATOR/DRIVER
— TOP VIEW —

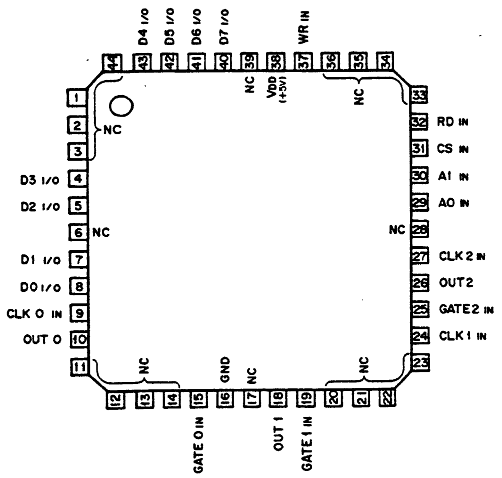

CKSYN IN 1
PRCK OUT 2
3 NC
REN1 IN 4
RDY1 IN 5
READY OUT 6
RDY2 IN 7
REN2 IN 8
CK OUT 9
10 GND
VDD (+5V) 20
19 X1 IN
NC 18
17 X2 IN
16 RDYSYN IN
15 EXFS IN
14 F/X IN
13 OSC OUT
12 RESIN IN
11 RESET OUT


15 EXFS
19 X1
17 X2
14 F/X
1 CKSYN
5 RDY1
7 RDY2
4 REN1
8 REN2
16 RDYSYN
12 RESIN
PRCK 2
CK 9
OSC 13
READY 6
RESET 11

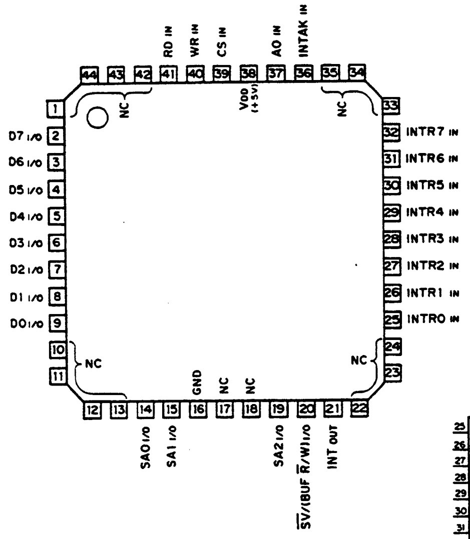
X1, X2 ; CRYSTAL INPUT
EXFS ; EXTERNAL FREQUENCY SOURCE INPUT
F/X ; FREQUENCY/CRYSTAL SELECT INPUT
CK ; PROCESSOR CLOCK OUTPUT
PRCK ; PERIPHERAL CLOCK OUTPUT
OSC ; OSCILLATOR OUTPUT
CKSYN ; CLOCK SYNCHRONIZATION INPUT
RESIN ; RESET INPUT
RDY1, RDY2 ; BUS READY INPUT
REN1, REN2 ; READY ENABLE INPUT
RDYSYN ; READY SYNCHRONIZATION SELECT INPUT


X1 19
X2 17
OSCILLATOR
13 OSC
F/X 14
EXFS 15
÷2 SYNC
÷2 SYNC
2 PRCK
CKSYN 1
REN1 4
RDY1 5
REN2 8
RDY2 7
9 CK
D Q
D Q
6 READY
RDYSYN 16
RESIN 12
D Q
11 RESET

uPD71054G (NEC) FLAT PACKAGE
C-MOS PROGRAMMABLE TIMER COUNTER
— TOP VIEW —


D4 I/O
D5 I/O
D6 I/O
D7 I/O
WR IN
NC
VDD (+5V)
NC
NC
D3 I/O
D2 I/O
NC
D1 I/O
D0 I/O
CLK 0 IN
OUT 0
RD IN
CS IN
A1 IN
A0 IN
NC
CLK 2 IN
OUT 2
GATE 2 IN
CLK 1 IN
NC
GND
NC
NC
GATE 0 IN
OUT 1
GATE 1 IN

uPD71059G (NEC) FLAT PACKAGE
C-MOS INTERRUPT CONTROL UNIT
— TOP VIEW —


RD IN
WR IN
CS IN
A0 IN
INTAK IN
NC
VDD (+5V)
NC
D7 I/O
D6 I/O
D5 I/O
D4 I/O
D3 I/O
D2 I/O
D1 I/O
D0 I/O
NC
INTR7 IN
INTR6 IN
INTR5 IN
INTR4 IN
INTR3 IN
INTR2 IN
INTR1 IN
INTR0 IN
NC
GND
NC
NC
SA0 I/O
SA1 I/O
SA2 I/O
$\overline{SV}$/(BUF $\overline{R}$/W) I/O
INT OUT

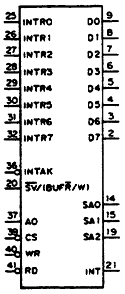
FUNCTION TABLE

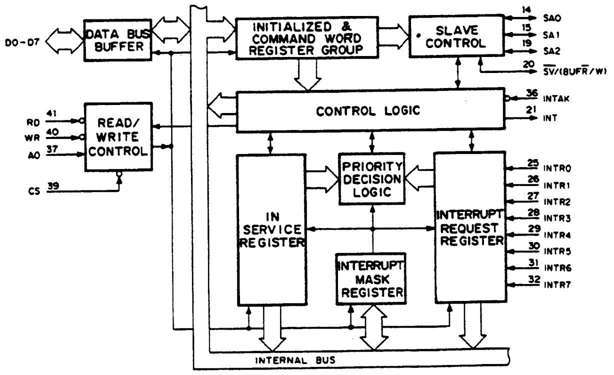
INPUTS					FUNCTION
CS	RD	WR	A1	A0	
0	1	0	0	0	Load Counter No. 0
0	1	0	0	1	Load Counter No. 1
0	1	0	1	0	Load Counter No. 2
0	1	0	1	1"	Control Word
0	0	1	0	0	Read Counter 0
0	0	1	0	1	Read Counter 1
0	0	1	1	0	Read Counter 2
0	0	1	1	1	No-Operation (HI-Z)
1	X	X	X	X	Disable (HI-Z)
0	1	1	X	X	No-Operation (HI-Z)

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

D7-D0 ; 8-BIT DATA I/O
CLK 0-2 ; COUNTER CLOCK
GATE 0-2 ; COUNTER GATE
OUT 0-2 ; COUNTER OUTPUT
RD ; READ COUNTER
WR ; WRITE CMD OR DATA
CS ; CHIP SELECT
A0,A1 ; COUNTER SELECT

INTR0-INTR7 ; INTERRUPT REQUEST INPUTS
D0-D7 ; DATA BUS INPUTS/OUTPUTS
CS ; CHIP SELECT INPUT
RD ; READ STROBE INPUT
WR ; WRITE STROBE INPUT
A0 ; ADDRESS INPUT
INT ; INTERRUPT OUTPUT
INTAK ; INTERRUPT ACKNOWLEDGE INPUT
$\overline{SV}$/(BUF$\overline{R}$/W) ; SLAVE/BUFFER $\overline{READ}$/WRITE INPUT/OUTPUT
SA0-SA2 ; SLAVE ADDRESS INPUTS/OUTPUTS


25 INTR0
26 INTR1
27 INTR2
28 INTR3
29 INTR4
30 INTR5
31 INTR6
32 INTR7
36 INTAK
20 $\overline{SV}$/(BUF$\overline{R}$/W)
37 A0
38 CS
40 WR
41 RD
D0 9
D1 8
D2 7
D3 6
D4 5
D5 4
D6 3
D7 2
SA0 14
SA1 15
SA2 19
INT 21


D0-D7
DATA BUS BUFFER
INITIALIZED & COMMAND WORD REGISTER GROUP
SLAVE CONTROL
14 SA0
15 SA1
19 SA2
20 $\overline{SV}$/(BUF$\overline{R}$/W)
CONTROL LOGIC
36 INTAK
21 INT
41 RD
40 WR
37 A0
READ/WRITE CONTROL
39 CS
IN SERVICE REGISTER
PRIORITY DECISION LOGIC
INTERRUPT REQUEST REGISTER
INTERRUPT MASK REGISTER
25 INTR0
26 INTR1
27 INTR2
28 INTR3
29 INTR4
30 INTR5
31 INTR6
32 INTR7
INTERNAL BUS

CONTROL WORD FORMAT

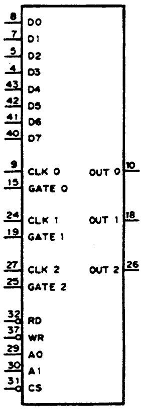
D7	D6	D5	D4	D3	D2	D1	D0
SC1	SC0	RL1	RL0	M2	M1	M0	BCD

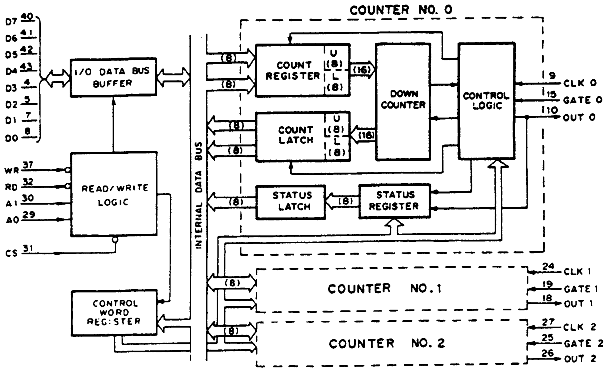
BCD	OPERATION
0	16-BIT BINARY
1	BCD (4-DECADE)

M2	M1	M0	MODE
0	0	0	0
0	0	1	1
X	1	0	2
X	1	1	3
1	0	0	4
1	0	1	5

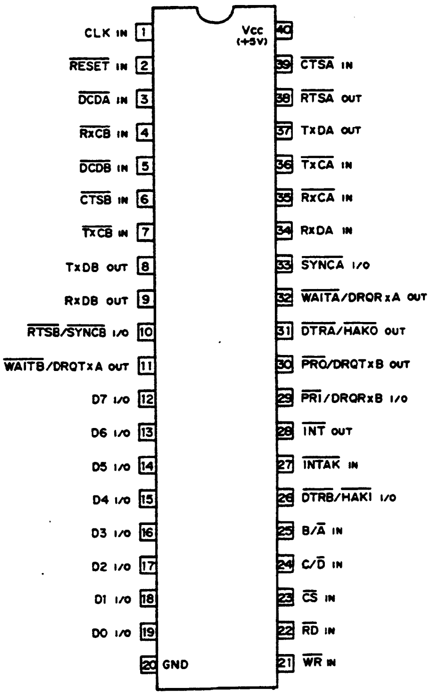
RL1	RL0	OPERATION
0	0	COUNTER LATCHING
0	1	READ/LOAD LSB ONLY
1	0	READ/LOAD MSB ONLY
1	1	LSB FIRST THEN MSB

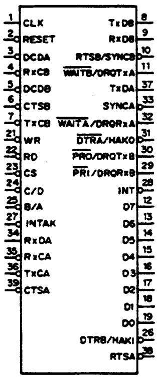
SC1	SC0	SELECTED COUNTER
0	0	COUNTER No. 0
0	1	COUNTER No. 1
1	0	COUNTER No. 2
1	1	MULTIPLE LATCH CMD

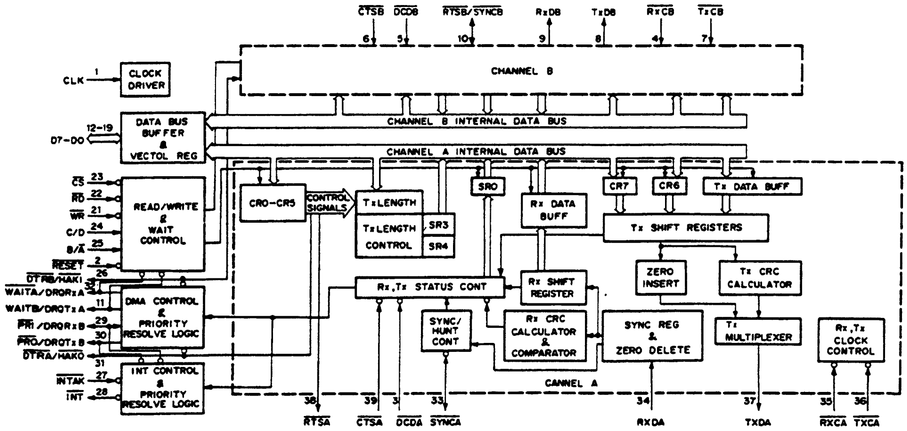

8 D0
7 D1
5 D2
4 D3
43 D4
42 D5
41 D6
40 D7
9 CLK 0
15 GATE 0
OUT 0 10
24 CLK 1
19 GATE 1
OUT 1 18
27 CLK 2
25 GATE 2
OUT 2 26
32 RD
37 WR
29 A0
30 A1
31 CS


COUNTER NO. 0
D7 40
D6 41
D5 42
D4 43
D3 4
D2 5
D1 7
D0 8
I/O DATA BUS BUFFER
WR 37
RD 32
A1 30
A0 29
READ/WRITE LOGIC
CS 31
CONTROL WORD REGISTER
INTERNAL DATA BUS
(8)
COUNT REGISTER
U (8)
L (8)
(16)
DOWN COUNTER
COUNT LATCH
CONTROL LOGIC
STATUS LATCH
STATUS REGISTER
9 CLK 0
15 GATE 0
10 OUT 0
COUNTER NO. 1
24 CLK 1
19 GATE 1
18 OUT 1
COUNTER NO. 2
27 CLK 2
25 GATE 2
26 OUT 2

uPD7201AC (NEC)
uPD7201AD (NEC)
MULTI-PROTOCOL SERIAL CONTROLLER
— TOP VIEW —


CLK IN 1
RESET IN 2
DCDA IN 3
RxCB IN 4
DCDB IN 5
CTSB IN 6
TxCB IN 7
TxDB OUT 8
RxDB OUT 9
RTSB/SYNCB I/O 10
WAITB/DRQTxA OUT 11
D7 I/O 12
D6 I/O 13
D5 I/O 14
D4 I/O 15
D3 I/O 16
D2 I/O 17
D1 I/O 18
D0 I/O 19
20 GND
Vcc (+5V) 40
39 CTSA IN
38 RTSA OUT
37 TxDA OUT
36 TxCA IN
35 RxCA IN
34 RxDA IN
33 SYNCA I/O
32 WAITA/DRQRxA OUT
31 DTRA/HAKO OUT
30 PRO/DRQTxB OUT
29 PRI/DRQRxB I/O
28 INT OUT
27 INTAK IN
26 DTRB/HAKI I/O
25 B/A IN
24 C/D IN
23 CS IN
22 RD IN
21 WR IN


1 CLK
2 RESET
3 DCDA
4 RxCB
5 DCDB
6 CTSB
7 TxCB
21 WR
22 RD
23 CS
24 C/D
25 B/A
27 INTAK
34 RxDA
35 RxCA
36 TxCA
39 CTSA
TxDB 8
RxDB 9
RTSB/SYNCB 10
WAITB/DRQTxA 11
TxDA 37
SYNCA 33
WAITA/DRQRxA 32
DTRA/HAKO 31
PRO/DRQTxB 30
PRI/DRQRxB 29
INT 28
D7 12
D6 13
D5 14
D4 15
D3 16
D2 17
D1 18
D0 19
DTRB/HAKI 26
RTSA 38


CTSB
DCDB
RTSB/SYNCB
RxDB
TxDB
RxCB
TxCB
CHANNEL B
CLK
CLOCK DRIVER
D7–D0
12–19
DATA BUS BUFFER & VECTOL REG
CHANNEL B INTERNAL DATA BUS
CHANNEL A INTERNAL DATA BUS
CS
RD
WR
C/D
B/A
RESET
READ/WRITE & WAIT CONTROL
DTRB/HAKI
WAITA/DRQRxA
WAITB/DRQTxA
PRI/DRQRxB
PRO/DRQTxB
DTRA/HAKO
DMA CONTROL & PRIORITY RESOLVE LOGIC
INTAK
INT
INT CONTROL & PRIORITY RESOLVE LOGIC
CR0–CR5
CONTROL SIGNALS
TxLENGTH
TxLENGTH CONTROL
SR3
SR4
SR0
Rx DATA BUFF
CR7
CR6
Tx DATA BUFF
Tx SHIFT REGISTERS
ZERO INSERT
Tx CRC CALCULATOR
Rx,Tx STATUS CONT
Rx SHIFT REGISTER
SYNC/HUNT CONT
Rx CRC CALCULATOR & COMPARATOR
SYNC REG & ZERO DELETE
Tx MULTIPLEXER
Rx,Tx CLOCK CONTROL
CANNEL A
RTSA
CTSA
DCDA
SYNCA
RXDA
TXDA
RXCA
TXCA

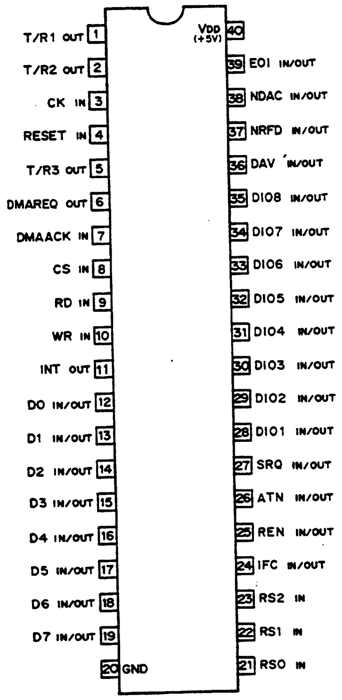
CLK; SYSTEM CLOCK
D7-D0; DATA BUS
CS; CHIP SELECT
WR; WRITE
RD; READ
C/D; CONTROL/DATA
B/A; CHANNEL B/CHANNEL A
INT; INTERRUPT REQUEST
INTAK; INTERRUPT ACKNOWLEDGE
PRI/DRQRxB; PRIORITY INPUT/DMA REQUEST RxB
PRO/DRQTxB; PRIORITY OUTPUT/DMA REQUEST TxB
WAITA/DRQRxA; WAIT A/DMA REQUEST RxA
WAITB/DRQTxA; WAIT B/DMA REQUEST TxA
DTRB/HAKI; DATA TERMINAL READY/HOLD ACKNOWLEDGE INPUT
DTRA/HAKO; DATA TERMINAL READY/HOLD ACKNOWLEDGE OUTPUT
RxDA, RxDB; RECEIVE DATA A/B
TxDA, TxDB; TRANSMIT DATA A/B
RxCA, RxCB; RECEIVE CLOCK A/B
TxCA, TxCB; TRANSMIT CLOCK A/B
SYNCA; SYNCHRONIZATION A
RTSB/SYNCB; REQUEST TO SEND B/SYNCHRONIZATION B

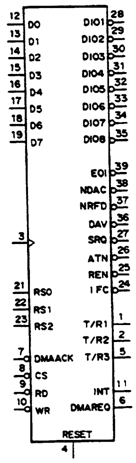
CHANNEL SELECTION

B/A	C/D	RD	WR	CS	FANCTION	
0	0	0	1	0	CHANNEL A	WRITE(TxD)
1					CHANNEL B	
0	0	1	0	0	CHANNEL A	READ(RxD)
1					CHANNEL B	
0	1	0	1	0	CHANNEL A	WRITE(COMMAND/PARAMETER·REGISTER)
1					CHANNEL B	
0	1	1	0	0	CHANNEL A	READ(STATUS/VECTER·REGISTER)
1					CHANNEL B	

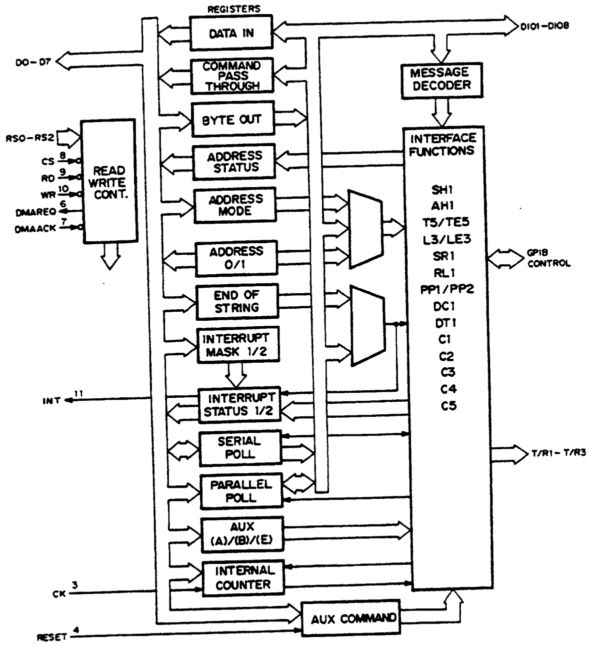
CTSA, CTSB; CLEAR TO SEND A/B
DCDA, DCDB; DATA CARRIER DETECT A/B
RTSA; REQUEST TO SEND A

uPD7210C (NEC)
N-MOS GENERAL PURPOSE INTERFACE BUS-INTERFACE CONTROLLER
— TOP VIEW —

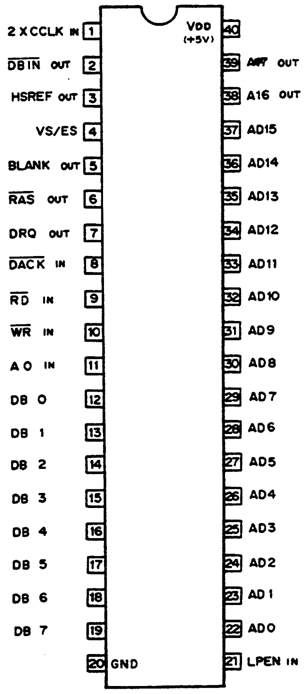

T/R1 OUT 1
T/R2 OUT 2
CK IN 3
RESET IN 4
T/R3 OUT 5
DMAREQ OUT 6
DMAACK IN 7
CS IN 8
RD IN 9
WR IN 10
INT OUT 11
D0 IN/OUT 12
D1 IN/OUT 13
D2 IN/OUT 14
D3 IN/OUT 15
D4 IN/OUT 16
D5 IN/OUT 17
D6 IN/OUT 18
D7 IN/OUT 19
20 GND
VDD (+5V) 40
39 EOI IN/OUT
38 NDAC IN/OUT
37 NRFD IN/OUT
36 DAV IN/OUT
35 DIO8 IN/OUT
34 DIO7 IN/OUT
33 DIO6 IN/OUT
32 DIO5 IN/OUT
31 DIO4 IN/OUT
30 DIO3 IN/OUT
29 DIO2 IN/OUT
28 DIO1 IN/OUT
27 SRQ IN/OUT
26 ATN IN/OUT
25 REN IN/OUT
24 IFC IN/OUT
23 RS2 IN
22 RS1 IN
21 RS0 IN

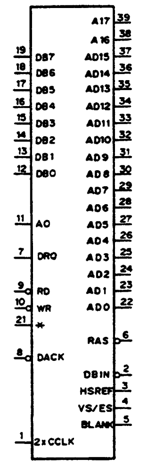

12 D0
13 D1
14 D2
15 D3
16 D4
17 D5
18 D6
19 D7
3
21 RS0
22 RS1
23 RS2
7 DMAACK
8 CS
9 RD
10 WR
DIO1 28
DIO2 29
DIO3 30
DIO4 31
DIO5 32
DIO6 33
DIO7 34
DIO8 35
EOI 39
NDAC 38
NRFD 37
DAV 36
SRQ 27
ATN 26
REN 25
IFC 24
T/R1 1
T/R2 2
T/R3 5
INT 11
DMAREQ 6
RESET
4

D0-D7;	DATA BUS INPUTS/OUTPUTS
CS;	CHIP SELECT INPUT
RD;	READ ENABLE INPUT
WR;	WRITE ENABEL INPUT
RS0-RS2;	REGISTER SELECT INPUTS
INT;	INTERRUPT REQUEST OUTPUT
DMAREQ;	DMA REQUEST OUTPUT
DMAACK;	DMA ACKNOWLEDGE INPUT
T/R1-T/R3;	TRANSMIT/RECEIVE CONTROL OUTPUTS
DIO1-DIO8;	DATA INPUTS/OUTPUTS
DAV;	DATA VALID INPUT/OUTPUT
NRFD;	NOT READY FOR DATA INPUT/OUTPUT
NDAC;	NOT DATA ACCEPTED INPUT/OUTPUT
ATN;	ATTENTION INPUT/OUTPUT
IFC;	INTERFACE CLEAR INPUT/OUTPUT
SRQ;	SERVICE REQUEST INPUT/OUTPUT
REN;	REMOTE ENABLE INPUT/OUTPUT
EOI;	END OR IDENTIFY INPUT/OUTPUT


REGISTERS
DATA IN
COMMAND PASS THROUGH
BYTE OUT
ADDRESS STATUS
ADDRESS MODE
ADDRESS 0/1
END OF STRING
INTERRUPT MASK 1/2
INTERRUPT STATUS 1/2
SERIAL POLL
PARALLEL POLL
AUX (A)/(B)/(E)
INTERNAL COUNTER
AUX COMMAND
D0-D7
RS0-RS2
CS 8
RD 9
WR 10
DMAREQ 6
DMAACK 7
READ WRITE CONT.
INT 11
CK 3
RESET 4
DIO1-DIO8
MESSAGE DECODER
INTERFACE FUNCTIONS
SH1
AH1
T5/TE5
L3/LE3
SR1
RL1
PP1/PP2
DC1
DT1
C1
C2
C3
C4
C5
GPIB CONTROL
T/R1-T/R3

uPD7220AD (NEC) (6MHz)
uPD7220AD-2 (NEC) (8MHz)
uPD7220D-1 (NEC) (5MHz)
N-MOS GRAPHIC DISPLAY CONTROLLER
— TOP VIEW —

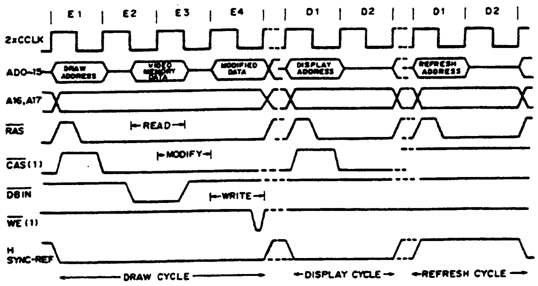

2 X CCLK IN 1
DBIN OUT 2
HSREF OUT 3
VS/ES 4
BLANK OUT 5
RAS OUT 6
DRQ OUT 7
DACK IN 8
RD IN 9
WR IN 10
A0 IN 11
DB 0 12
DB 1 13
DB 2 14
DB 3 15
DB 4 16
DB 5 17
DB 6 18
DB 7 19
20 GND
VDD (+5V) 40
39 A17 OUT
38 A16 OUT
37 AD15
36 AD14
35 AD13
34 AD12
33 AD11
32 AD10
31 AD9
30 AD8
29 AD7
28 AD6
27 AD5
26 AD4
25 AD3
24 AD2
23 AD1
22 AD0
21 LPEN IN


A17 39
A16 38
DB7 19
DB6 18
DB5 17
DB4 16
DB3 15
DB2 14
DB1 13
DB0 12
AD15 37
AD14 36
AD13 35
AD12 34
AD11 33
AD10 32
AD9 31
AD8 30
AD7 29
AD6 28
AD5 27
AD4 26
AD3 25
AD2 24
AD1 23
AD0 22
11 A0
7 DRQ
9 RD
10 WR
21 *
8 DACK
RAS 6
DBIN 2
HSREF 3
VS/ES 4
BLANK 5
1 2xCCLK

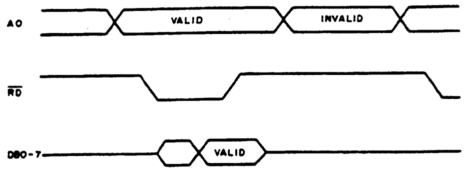
2XCCLK	; 2 X CHARACTER CLOCK
AO	; ADDRESS BUS O
A16,A17	; DISPLAY MEMORY ADDRESS
ADO-AD15	; DISPLAY MEMORY ADDRESS /DATA BUS
BLANK	; BLANKING SIGNAL
DACK	; DMA ACKNOWLEDGE
DBO-DB7	; DATA BUS
DBIN	; DATA BUS IN
DRQ	; DMA REQUEST
HSREF	; HORIZONTAL SYNC REFRESH TIMING
LPEN	; LIGHT PEN STROBE
RAS	; ROW ADDRESS STROBE
RD	; READ STROBE
VS/ES	; VERTICAL SYNC OUT/ EXTERNAL SYNC IN
WR	; WRITE STROBE
WAIT	; DRAWING WAIT

*
μPD7220AD? ; LPEN/WAIT
μPD7220D-1 ; LPEN

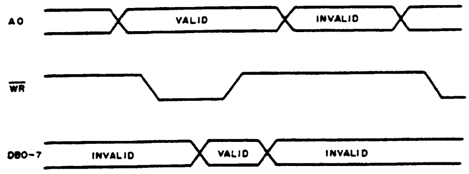
VIDEO MEMORY CONTROL TIMING


E1
E2
E3
E4
D1
D2
D1
D2
2xCCLK
AD0~15
DRAW ADDRESS
VIDEO MEMORY DATA
MODIFIED DATA
DISPLAY ADDRESS
REFRESH ADDRESS
A16,A17
RAS
READ
CAS(1)
MODIFY
DBIN
WRITE
WE (1)
H SYNC-REF
DRAW CYCLE
DISPLAY CYCLE
REFRESH CYCLE

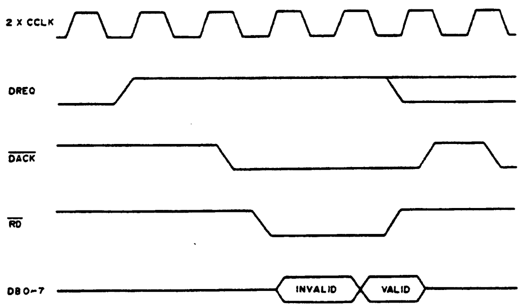
READ TIMING


A0
VALID
INVALID
RD
DB0-7
VALID

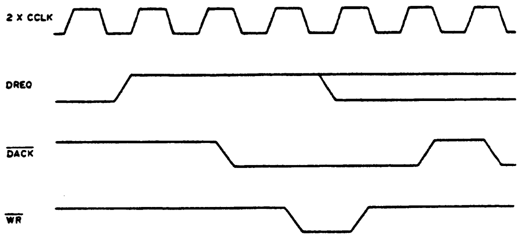
WRITE TIMING

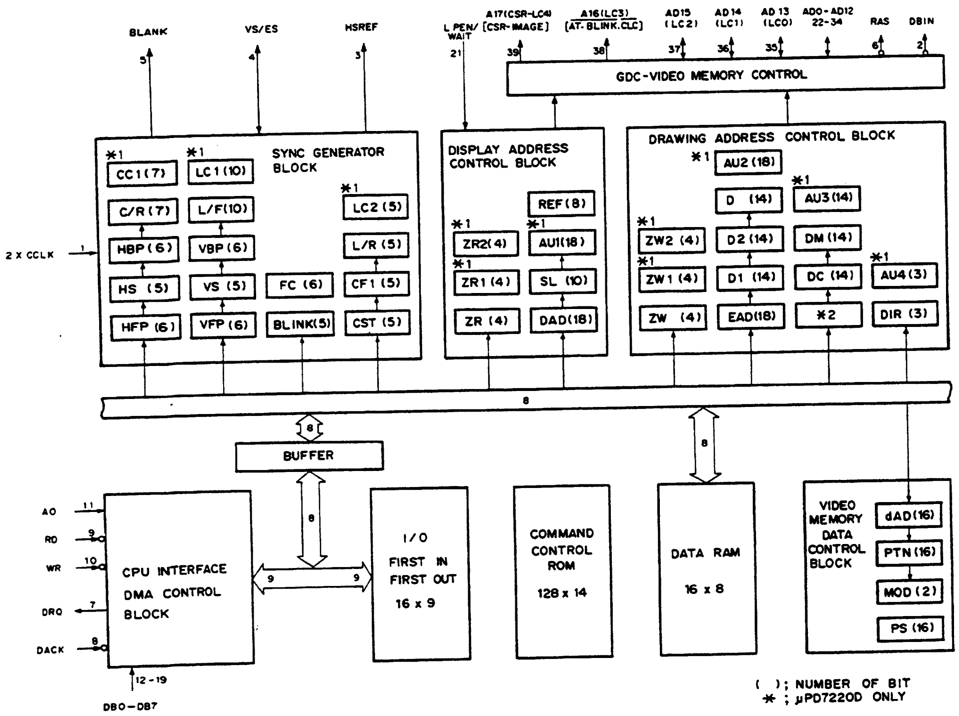

A0
VALID
INVALID
WR
DB0-7
INVALID
VALID
INVALID

DMA READ TIMING


2 X CCLK
DREQ
DACK
RD
DB0-7
INVALID
VALID

DMA WRITE TIMING


2 X CCLK
DREQ
DACK
WR

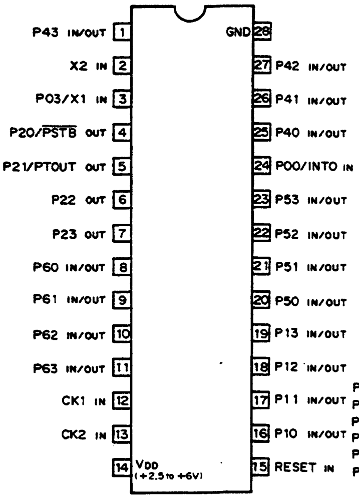

BLANK
VS/ES
HSREF
5
4
3
L PEN/ WAIT
21
A17(CSR-LC4) [CSR-IMAGE]
39
A16(LC3) [AT-BLINK.CLC]
38
AD15 (LC2)
37
AD14 (LC1)
36
AD13 (LC0)
35
AD0-AD12 22-34
RAS
6
DBIN
2
GDC-VIDEO MEMORY CONTROL
SYNC GENERATOR BLOCK
*1
CC1(7)
*1
LC1(10)
C/R(7)
L/F(10)
*1
LC2(5)
HBP(6)
VBP(6)
L/R(5)
HS (5)
VS (5)
FC (6)
CF1 (5)
HFP (6)
VFP (6)
BLINK(5)
CST (5)
2 X CCLK
1
DISPLAY ADDRESS CONTROL BLOCK
REF(8)
*1
ZR2(4)
*1
AU1(18)
*1
ZR1 (4)
SL (10)
ZR (4)
DAD(18)
DRAWING ADDRESS CONTROL BLOCK
*1
AU2 (18)
D (14)
*1
AU3 (14)
*1
ZW2 (4)
D2 (14)
DM (14)
*1
ZW1 (4)
D1 (14)
DC (14)
*1
AU4 (3)
ZW (4)
EAD(18)
*2
DIR (3)
8
8
BUFFER
8
8
AO
11
RD
9
WR
10
DRQ
7
DACK
8
CPU INTERFACE DMA CONTROL BLOCK
12-19
DB0-DB7
9
9
I/O FIRST IN FIRST OUT 16 x 9
COMMAND CONTROL ROM 128 x 14
DATA RAM 16 x 8
VIDEO MEMORY DATA CONTROL BLOCK
dAD(16)
PTN(16)
MOD(2)
PS(16)
( ); NUMBER OF BIT
*; µPD7220D ONLY

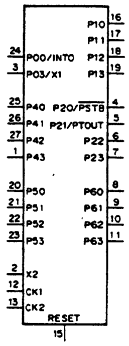
ABBREVIATIONS OF REGISTER

AU1-4	; ARITHMETIC LOGIC UNIT
BLINK	; BLINKING
CC1	; CHARACTER COUNTER
CF1	; FINAL CURSOR LINE
C/R	; NUMBER OF CHARACTERS PER ROW
CST	; CURSOR START LINE
DAD	; DISPLAY ADDRESS
dAD	; DOT ADDRESS
DIR	; DRAW DIRECTION
D1	; DRAW PARAMETER
D2	; DRAW PARAMETER
D	; DRAW PARAMETER
DC	; DRAW PARAMETER
DM	; DRAW PARAMETER
EAD	; DRAW ADDRESS
FC	; FRAME COUNTER
HBP	; HORIZONTAL BACK PORCH
HFP	; HORIZONTAL FRONT PORCH
HS	; HORIZONTAL SYNC
LC1,2	; LINE COUNTER
L/F	; NUNBER OF LINES PER FRAME
L/R	; NUNBER OF LINES PER ROW
MOD	; MODIFIED DOT MODE
P	; PITCH(TOTAL ADDRESS IN HORIZONTAL)
PS	; POINTER
PTN	; PATTERN
REF	; REFRESH COUNTER
SL	; SCANNING LINE
VBP	; VERTICAL BACK PORCH
VFP	; VERTICAL FRONT PORCH
VS	; VERTICAL SYNC
ZR	; ZOOMING REGISTER
ZR1,2	; ZOOMING REGISTER COUNTER
ZW	; ZOOMING DRAW
ZW1,2	; ZOOMING DRAW COUNTER

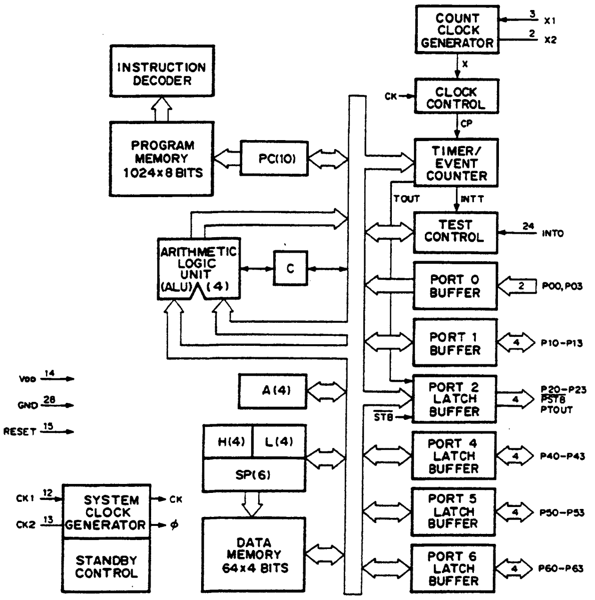
*1; µPD7220D-1 ONLY
*2 µPD7220AD? ;P(9)
µPD7220D-1 ;P(8)

uPD7506CT (NEC)
C-MOS SINGLE CHIP 4-BIT MICROCOMPUTER
— TOP VIEW —

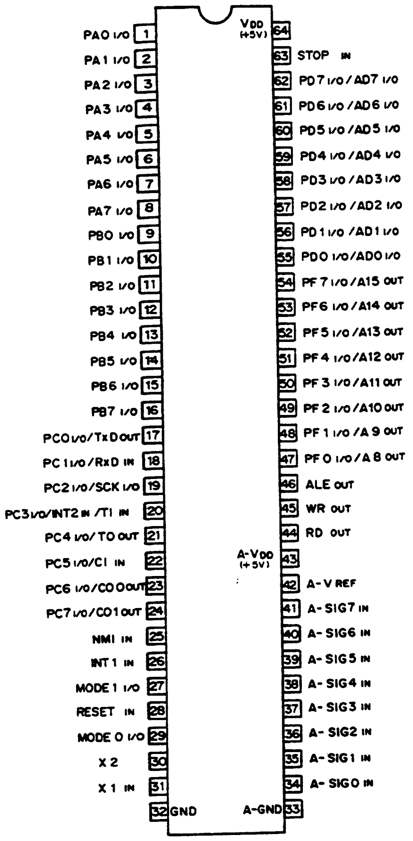

P43 IN/OUT 1
X2 IN 2
P03/X1 IN 3
P20/PSTB OUT 4
P21/PTOUT OUT 5
P22 OUT 6
P23 OUT 7
P60 IN/OUT 8
P61 IN/OUT 9
P62 IN/OUT 10
P63 IN/OUT 11
CK1 IN 12
CK2 IN 13
14 VDD (+2.5 to +6V)
GND 28
27 P42 IN/OUT
26 P41 IN/OUT
25 P40 IN/OUT
24 P00/INTO IN
23 P53 IN/OUT
22 P52 IN/OUT
21 P51 IN/OUT
20 P50 IN/OUT
19 P13 IN/OUT
18 P12 IN/OUT
17 P11 IN/OUT
16 P10 IN/OUT
15 RESET IN

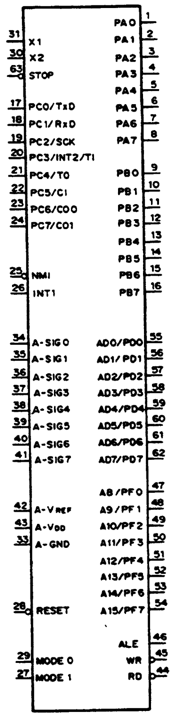

24 P00/INTO
3 P03/X1
25 P40
26 P41
27 P42
1 P43
20 P50
21 P51
22 P52
23 P53
2 X2
12 CK1
13 CK2
P10 16
P11 17
P12 18
P13 19
P20/PSTB 4
P21/PTOUT 5
P22 6
P23 7
P60 8
P61 9
P62 10
P63 11
RESET 15

P00,P03 ; PORT 0 INPUTS
P10-P13 ; PORT 1 INPUTS/OUTPUTS
P20-P23 ; PORT 2 OUTPUTS
P40-P43 ; PORT 4 INPUTS/OUTPUTS
P50-P53 ; PORT 5 INPUTS/OUTPUTS
P60-P63 ; PORT 6 INPUTS/OUTPUTS
INTO ; TESTABLE INPUT
PSTB ; STROBE OUTPUT
PTOUT ; PORT TIMER OUT OUTPUT
X1,X2 ; CRYSTAL
CK1,CK2 ; CLOCK INPUTS

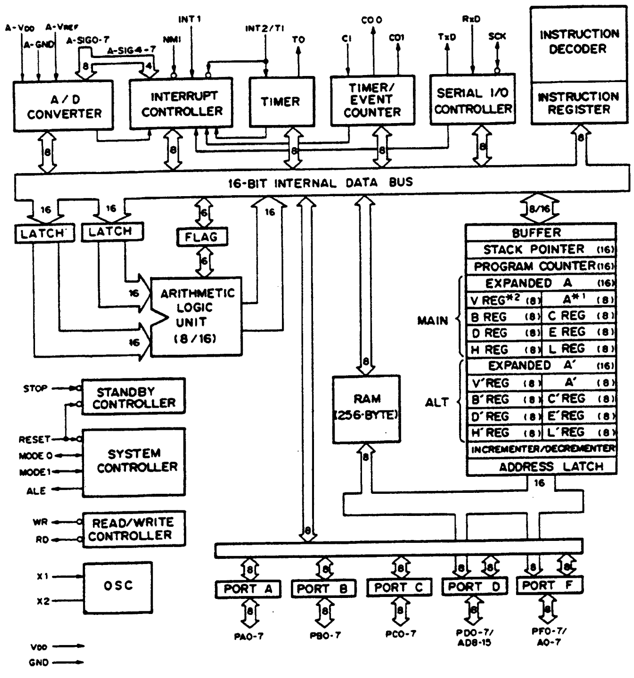

COUNT CLOCK GENERATOR
3 X1
2 X2
X
INSTRUCTION DECODER
CK
CLOCK CONTROL
CP
PROGRAM MEMORY 1024x8 BITS
PC(10)
TIMER/ EVENT COUNTER
TOUT
INTT
TEST CONTROL
24 INTO
ARITHMETIC LOGIC UNIT (ALU) (4)
C
PORT 0 BUFFER
2 P00,P03
PORT 1 BUFFER
4 P10-P13
VDD 14
GND 28
RESET 15
A(4)
PORT 2 LATCH BUFFER
4 P20-P23 PSTB PTOUT
STB
H(4)
L(4)
SP(6)
PORT 4 LATCH BUFFER
4 P40-P43
CK1 12
CK2 13
SYSTEM CLOCK GENERATOR
CK
ϕ
STANDBY CONTROL
DATA MEMORY 64x4 BITS
PORT 5 LATCH BUFFER
4 P50-P53
PORT 6 LATCH BUFFER
4 P60-P63

uPD78C10G
C-MOS SINGLE CHIP 8-BIT MICROPROCESSOR WITH A/D CONVERTER
— TOP VIEW —


PA0 I/O 1
PA1 I/O 2
PA2 I/O 3
PA3 I/O 4
PA4 I/O 5
PA5 I/O 6
PA6 I/O 7
PA7 I/O 8
PB0 I/O 9
PB1 I/O 10
PB2 I/O 11
PB3 I/O 12
PB4 I/O 13
PB5 I/O 14
PB6 I/O 15
PB7 I/O 16
PC0 I/O/TxD OUT 17
PC1 I/O/RxD IN 18
PC2 I/O/SCK I/O 19
PC3 I/O/INT2 IN /TI IN 20
PC4 I/O/TO OUT 21
PC5 I/O/CI IN 22
PC6 I/O/CO0 OUT 23
PC7 I/O/CO1 OUT 24
NMI IN 25
INT1 IN 26
MODE 1 I/O 27
RESET IN 28
MODE 0 I/O 29
X2 30
X1 IN 31
32 GND
VDD (+5V) 64
63 STOP IN
62 PD7 I/O /AD7 I/O
61 PD6 I/O /AD6 I/O
60 PD5 I/O /AD5 I/O
59 PD4 I/O /AD4 I/O
58 PD3 I/O /AD3 I/O
57 PD2 I/O /AD2 I/O
56 PD1 I/O /AD1 I/O
55 PD0 I/O /AD0 I/O
54 PF7 I/O /A15 OUT
53 PF6 I/O /A14 OUT
52 PF5 I/O /A13 OUT
51 PF4 I/O /A12 OUT
50 PF3 I/O /A11 OUT
49 PF2 I/O /A10 OUT
48 PF1 I/O /A9 OUT
47 PF0 I/O /A8 OUT
46 ALE OUT
45 WR OUT
44 RD OUT
A-VDD (+5V) 43
42 A-V REF
41 A-SIG7 IN
40 A-SIG6 IN
39 A-SIG5 IN
38 A-SIG4 IN
37 A-SIG3 IN
36 A-SIG2 IN
35 A-SIG1 IN
34 A-SIG0 IN
A-GND 33


31 X1
30 X2
63 STOP
17 PC0/TxD
18 PC1/RxD
19 PC2/SCK
20 PC3/INT2/TI
21 PC4/TO
22 PC5/CI
23 PC6/CO0
24 PC7/CO1
25 NMI
26 INT1
34 A-SIG0
35 A-SIG1
36 A-SIG2
37 A-SIG3
38 A-SIG4
39 A-SIG5
40 A-SIG6
41 A-SIG7
42 A-VREF
43 A-VDD
33 A-GND
28 RESET
29 MODE 0
27 MODE 1
PA0 1
PA1 2
PA2 3
PA3 4
PA4 5
PA5 6
PA6 7
PA7 8
PB0 9
PB1 10
PB2 11
PB3 12
PB4 13
PB5 14
PB6 15
PB7 16
AD0/PD0 55
AD1/PD1 56
AD2/PD2 57
AD3/PD3 58
AD4/PD4 59
AD5/PD5 60
AD6/PD6 61
AD7/PD7 62
A8/PF0 47
A9/PF1 48
A10/PF2 49
A11/PF3 50
A12/PF4 51
A13/PF5 52
A14/PF6 53
A15/PF7 54
ALE 46
WR 45
RD 44

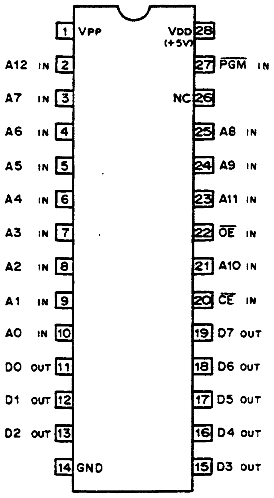
PA0-7;	INPUT/OUTPUT PORT A
PB0-7;	INPUT/OUTPUT PORT B
PC0-7;	INPUT/OUTPUT PORT C
TxD;	SERIAL DATA OUTPUT
RxD;	SERIAL DATA INPUT
SCK;	SERIAL CLOCK I/O
INT2/TI;	MASKABLE INTERRUPT REQUEST2 IN/TIMER INPUT
TO;	TIMER OUTPUT
CI;	COUNTER INPUT
CO 0;	COUNTER OUTPUT 0
CO 1;	COUNTER OUTPUT 1
PD0-7/AD0-7;	I/O PORT D / ADDRESS/DATA BUS
PF0-7/A8-15;	I/O PORT F / ADDRESS BUS
ALE;	ADDRESS LATCH ENABLE OUTPUT
RD;	READ STROBE OUTPUT
WR;	WRITE STROBE OUTPUT
MODE 0;	MEMORY MODE 0 INPUT/OUTPUT
MODE 1;	MEMORY MODE 1 INPUT/OUTPUT
RESET;	SYSTEM RESET INPUT
STOP;	SYSTEM STOP INPUT
NMI;	NON-MASKABLE INTERRUPT REQUEST INPUT
INT1;	MASKABLE INTERRUPT REQUEST 1 INPUT
X1,X2;	EXTERNAL CRYSTAL,X1;SYSTEM CLOCK INPUT
A-SIG 0 TO 7;	ANALOG INPUTS
A-VREF;	REFERENCE VOLTAGE

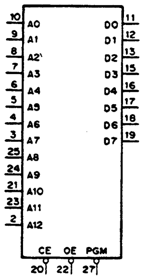

A-VDD
A-VREF
A-GND
A-SIG0-7
A-SIG4-7
NMI
INT1
INT2/TI
TO
CO0
CI
CO1
RxD
TxD
SCK
A/D CONVERTER
INTERRUPT CONTROLLER
TIMER
TIMER/EVENT COUNTER
SERIAL I/O CONTROLLER
INSTRUCTION DECODER
INSTRUCTION REGISTER
16-BIT INTERNAL DATA BUS
LATCH
LATCH
FLAG
ARITHMETIC LOGIC UNIT (8/16)
BUFFER
STACK POINTER (16)
PROGRAM COUNTER (16)
EXPANDED A (16)
V REG※2 (8)
A※1 (8)
B REG (8)
C REG (8)
D REG (8)
E REG (8)
H REG (8)
L REG (8)
MAIN
EXPANDED A' (16)
V'REG (8)
A' (8)
B'REG (8)
C'REG (8)
D'REG (8)
E'REG (8)
H'REG (8)
L'REG (8)
ALT
INCREMENTER/DECREMENTER
ADDRESS LATCH
RAM (256-BYTE)
STOP
STANDBY CONTROLLER
RESET
MODE 0
MODE 1
ALE
SYSTEM CONTROLLER
WR
RD
READ/WRITE CONTROLLER
X1
X2
OSC
VDD
GND
PORT A
PORT B
PORT C
PORT D
PORT F
PA0-7
PB0-7
PC0-7
PD0-7/AD8-15
PF0-7/A0-7
8
16
8/16

※1; ACCUMULATOR
※2; WORKING REGISTER VECTOR REG.

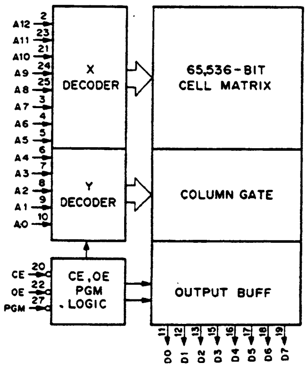
PROM

HN27C64G-20 (HITACHI) (ACCESS TIME = 200 nS)
MBM27C64-20 (FUJITSU) (ACCESS TIME = 200 nS)
MBM27C64-25 (FUJITSU) (ACCESS TIME = 250 nS)
MBM27C64-30 (FUJITSU) (ACCESS TIME = 300 nS)
C-MOS 64K (8K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
— TOP VIEW —

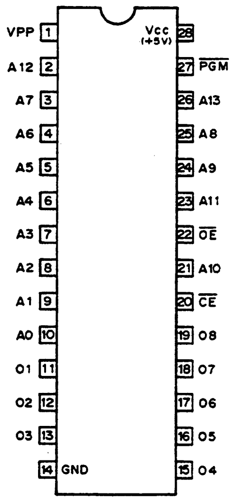

1 VPP
A12 IN 2
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10
D0 OUT 11
D1 OUT 12
D2 OUT 13
14 GND
VDD (+5V) 28
27 PGM IN
NC 26
25 A8 IN
24 A9 IN
23 A11 IN
22 OE IN
21 A10 IN
20 CE IN
19 D7 OUT
18 D6 OUT
17 D5 OUT
16 D4 OUT
15 D3 OUT

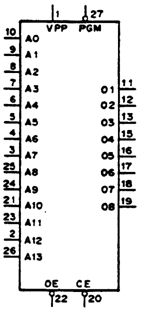

10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
D0 11
D1 12
D2 13
D3 15
D4 16
D5 17
D6 18
D7 19
CE OE PGM
20 22 27

A0-A12 : ADDRESS
CE : CHIP ENABLE
D0-D7 : DATA OUTPUT
OE : OUTPUT ENABLE
PGM : PROGRAM ENABLE
VPP : PROGRAM VOLTAGE

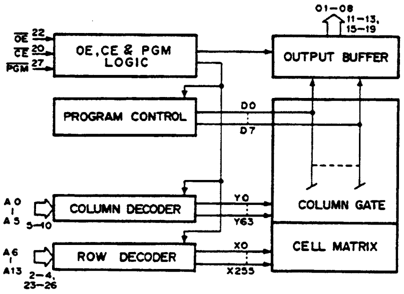

A12 2
A11 23
A10 21
A9 24
A8 25
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
X DECODER
Y DECODER
65,536-BIT CELL MATRIX
COLUMN GATE
CE 20
OE 22
PGM 27
CE, OE PGM LOGIC
OUTPUT BUFF
11 12 13 15 16 17 18 19
D0 D1 D2 D3 D4 D5 D6 D7

MBM27C128-25 (FUJITSU) (ACCESS TIME = 250nS)
CMOS 131,072-BIT EPROM
— TOP VIEW —


VPP 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
O1 11
O2 12
O3 13
14 GND
Vcc (+5V) 28
27 PGM
26 A13
25 A8
24 A9
23 A11
22 OE
21 A10
20 CE
19 O8
18 O7
17 O6
16 O5
15 O4


1 27
VPP PGM
10 A0
9 A1
8 A2
7 A3
6 A4
5 A5
4 A6
3 A7
25 A8
24 A9
21 A10
23 A11
2 A12
26 A13
O1 11
O2 12
O3 13
O4 15
O5 16
O6 17
O7 18
O8 19
OE CE
22 20

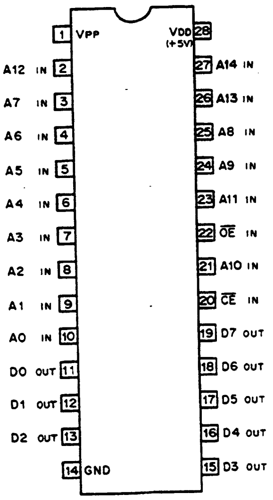
A0-13 : ADDRESS INPUT
CE : CHIP ENABLE
O1-8 : DATA OUTPUT
OE : OUTPUT ENABLE
PGM : PROGRAM ENABLE
VPP : PROGRAM POWER SUPPLY

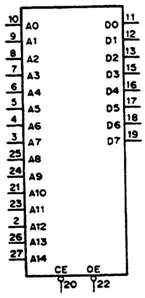

O1–O8
11–13, 15–19
OE 22
CE 20
PGM 27
OE, CE & PGM LOGIC
OUTPUT BUFFER
PROGRAM CONTROL
D0
D7
A0
A5
5–10
COLUMN DECODER
Y0
Y63
COLUMN GATE
A6
A13
2–4, 23–26
ROW DECODER
X0
X255
CELL MATRIX

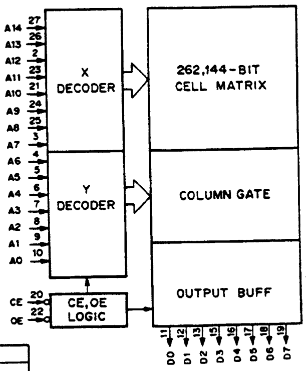
TERMINAL MODE	DATA OUTPUT	CE	OE	PGM	VPP
READ	DATA OUT	0	0	1	+5V
OUTPUT DISABLE	HIGH IMPEDANCE	0	1	1	+5V
OUTPUT DISABLE	HIGH IMPEDANCE	0	0	0	+5V
STANDBY	HIGH IMPEDANCE	1	X	X	+5V
PROGRAM	DATA IN	0	1	0	+21V
PROGRAM VERIFY	DATA OUT	0	0	1	+21V
PROGRAM INHIBIT	HIGH IMPEDANCE	1	X	X	+21V

0:LOW LEVEL
1:HIGH LEVEL
X:DON'T CARE

MBM27C256-20 (FUJITSU) (ACCESS TIME = 200 nS)
MBM27C256-25 (FUJITSU) (ACCESS TIME = 250 nS)
TC57256D-25 (TOSHIBA) (ACCESS TIME = 250 nS)
uPD27C256AD-12 (NEC) (ACCESS TIME = 120 nS)
C-MOS 256K (32K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
— TOP VIEW —


1 VPP
VDD (+5V) 28
A12 IN 2
A7 IN 3
A6 IN 4
A5 IN 5
A4 IN 6
A3 IN 7
A2 IN 8
A1 IN 9
A0 IN 10
D0 OUT 11
D1 OUT 12
D2 OUT 13
14 GND
27 A14 IN
26 A13 IN
25 A8 IN
24 A9 IN
23 A11 IN
22 OE IN
21 A10 IN
20 CE IN
19 D7 OUT
18 D6 OUT
17 D5 OUT
16 D4 OUT
15 D3 OUT


A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14
D0 D1 D2 D3 D4 D5 D6 D7
CE 20
OE 22

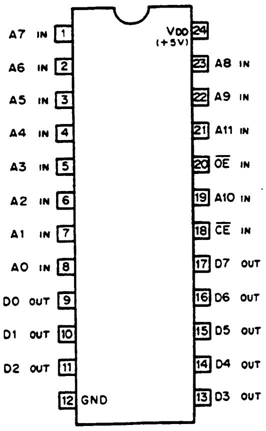

X DECODER
262,144-BIT CELL MATRIX
Y DECODER
COLUMN GATE
OUTPUT BUFF
CE,OE LOGIC
CE 20
OE 22
A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0
D0 D1 D2 D3 D4 D5 D6 D7

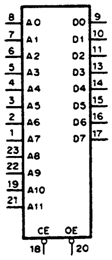
A0-A12 : ADDRESS
CE : CHIP ENABLE
D0-D7 : DATA OUTPUT
OE : OUTPUT ENABLE
Vpp ; PROGRAM POWER SUPPLY

An	CE	OE	Vpp	Dn	FUNCTION
An	0	0	+5V	D OUT	READ
An	0	1	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	HI-Z	STANDBY
An	0	1	+21V	DIN	PGM
An	0	0	+21V	D OUT	PGM VERIFY
X	1	X	+21V	HI-Z	PGM INH

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE

MBM27C32A-20 (FUJITSU) (ACCESS TIME = 200 nS)
MBM27C32A-25 (FUJITSU) (ACCESS TIME = 250 nS)
MBM27C32A-30 (FUJITSU) (ACCESS TIME = 300 nS)
C-MOS 32K (4Kx8) UV EPROM
— TOP VIEW —

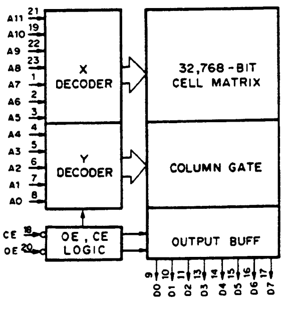

A7 IN 1
A6 IN 2
A5 IN 3
A4 IN 4
A3 IN 5
A2 IN 6
A1 IN 7
A0 IN 8
D0 OUT 9
D1 OUT 10
D2 OUT 11
12 GND
VDD (+5V) 24
23 A8 IN
22 A9 IN
21 A11 IN
20 OE IN
19 A10 IN
18 CE IN
17 D7 OUT
16 D6 OUT
15 D5 OUT
14 D4 OUT
13 D3 OUT


A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11
D0 D1 D2 D3 D4 D5 D6 D7
CE 18
OE 20

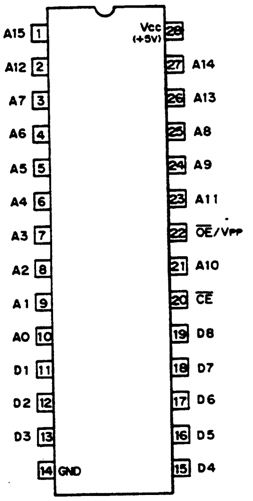
IN		OUT	FUNCTION
CE	OE	Dn	
0	0	DENTERED	READ
1	X	HIGH Z	STANDBY

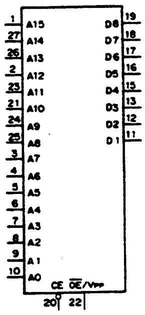
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HIGH Z ; HIGH IMPEDANCE

A0-A11 ; ADDRESS
CE ; CHIP ENABLE
OE ; OUTPUT ENABLE
D0-D7 ; DATA OUTPUTS


X DECODER
32,768-BIT CELL MATRIX
Y DECODER
COLUMN GATE
OE, CE LOGIC
OUTPUT BUFF
CE 18
OE 20
A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0
D0 D1 D2 D3 D4 D5 D6 D7

MBM27C512-25 (FUJISTU) (ACCESS TIME 250nS)
MBM27C512-30 (FUJISTU) (ACCESS TIME 300nS)
C-MOS 512K-8 BIT ERASABLE ROM
— TOP VIEW —

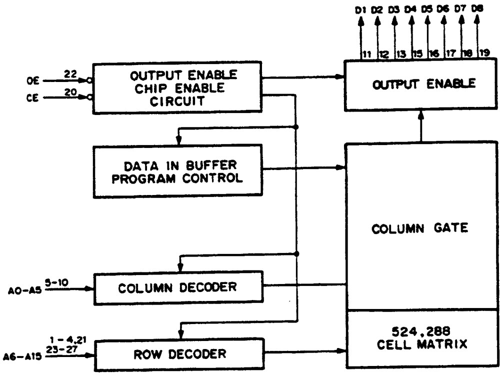

A15 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
D1 11
D2 12
D3 13
14 GND
Vcc (+5V) 28
27 A14
26 A13
25 A8
24 A9
23 A11
22 OE/VPP
21 A10
20 CE
19 D8
18 D7
17 D6
16 D5
15 D4


A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0
D8 D7 D6 D5 D4 D3 D2 D1
CE 20
OE/VPP 22

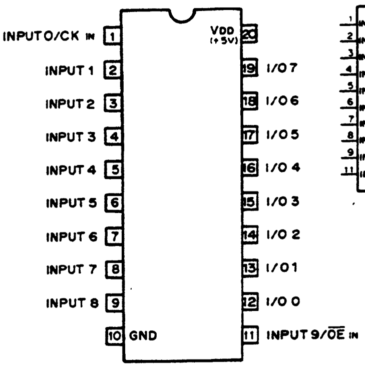
A0-A15; ADDRESS BUS
CE; CHIP ENABLE
D1-D8; DATA OUT
OE; OUTPUT ENABLE
Vpp ; PROGRAM POWER SUPPLY

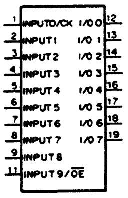
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

An	CE	OE/Vpp	Vcc	Dn	FUNCTION
AIN	0	0	+5V	Dout	READ
AIN	0	1	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	HI-Z	STANDBY
AIN	0	+ 12.5V	+6V	DIN	PGM
AIN	0	0	+6V	Dout	PGM VERIFY
X	1	+ 12.5V	+6V	HI-Z	PGM INH


D1 D2 D3 D4 D5 D6 D7 D8
11 12 13 15 16 17 18 19
OE 22
CE 20
OUTPUT ENABLE CHIP ENABLE CIRCUIT
OUTPUT ENABLE
DATA IN BUFFER PROGRAM CONTROL
COLUMN GATE
A0-A5 5-10
COLUMN DECODER
A6-A15 1-4,21 23-27
ROW DECODER
524,288 CELL MATRIX

VP16V8E (VLSI TECHNOLOGY)
C-MOS GENERIC ARRAY LOGIC
— TOP VIEW —

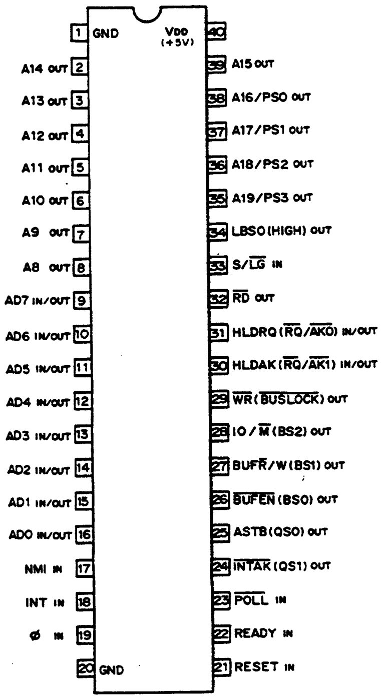

INPUT0/CK IN 1
INPUT 1 2
INPUT 2 3
INPUT 3 4
INPUT 4 5
INPUT 5 6
INPUT 6 7
INPUT 7 8
INPUT 8 9
10 GND
VDD (+5V) 20
19 I/O 7
18 I/O 6
17 I/O 5
16 I/O 4
15 I/O 3
14 I/O 2
13 I/O 1
12 I/O 0
11 INPUT 9/OE IN


INPUT0/CK
INPUT1
INPUT2
INPUT3
INPUT4
INPUT5
INPUT6
INPUT7
INPUT8
INPUT9/OE
I/O 0
I/O 1
I/O 2
I/O 3
I/O 4
I/O 5
I/O 6
I/O 7

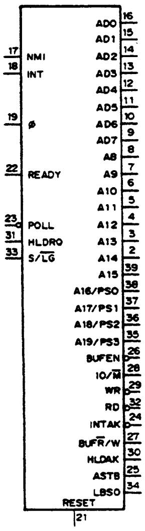
* ABOVE DIAGRAM SHOWS CONDITIONS BEFORE WRITING OF DATA.

IC

CXQ70108-5 (SONY)
CXQ70108-8 (SONY)
CXQ70108D-8 (SONY)
CXQ70108P-8 (SONY)
uPD70108D-5 (NEC)
uPD70108D-8 (NEC)
C-MOS 8-BIT MICROPROCESSOR
— TOP VIEW —



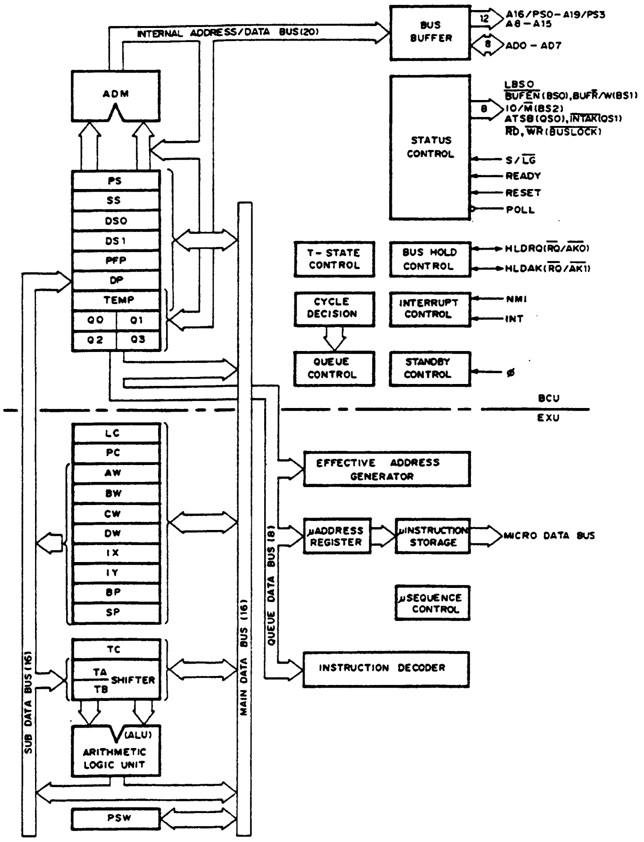
1 GND
2 A14 OUT
3 A13 OUT
4 A12 OUT
5 A11 OUT
6 A10 OUT
7 A9 OUT
8 A8 OUT
9 AD7 IN/OUT
10 AD6 IN/OUT
11 AD5 IN/OUT
12 AD4 IN/OUT
13 AD3 IN/OUT
14 AD2 IN/OUT
15 AD1 IN/OUT
16 AD0 IN/OUT
17 NMI IN
18 INT IN
19 ϕ IN
20 GND
40 VDD (+5V)
39 A15 OUT
38 A16/PS0 OUT
37 A17/PS1 OUT
36 A18/PS2 OUT
35 A19/PS3 OUT
34 LBS0 (HIGH) OUT
33 S/LG IN
32 RD OUT
31 HLDRQ (RQ/AK0) IN/OUT
30 HLDAK (RQ/AK1) IN/OUT
29 WR (BUSLOCK) OUT
28 IO/M (BS2) OUT
27 BUFR/W (BS1) OUT
26 BUFEN (BS0) OUT
25 ASTB (QS0) OUT
24 INTAK (QS1) OUT
23 POLL IN
22 READY IN
21 RESET IN



17 NMI
18 INT
19 ϕ
22 READY
23 POLL
31 HLDRQ
33 S/LG
AD0 16
AD1 15
AD2 14
AD3 13
AD4 12
AD5 11
AD6 10
AD7 9
A8 8
A9 7
A10 6
A11 5
A12 4
A13 3
A14 2
A15 39
A16/PS0 38
A17/PS1 37
A18/PS2 36
A19/PS3 35
BUFEN 26
IO/M 28
WR 29
RD 32
INTAK 24
BUFR/W 27
HLDAK 30
ASTB 25
LBS0 34
RESET
21

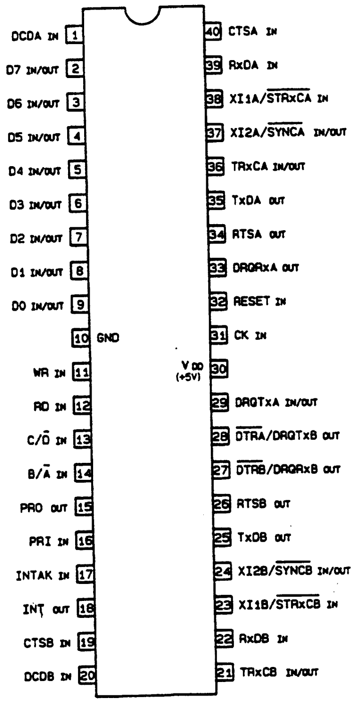
PIN No.	FUNCTION	
	S/$\overline{\text{LG}}$=HIGH LEVEL	S/$\overline{\text{LG}}$=LOW LEVEL
24	$\overline{\text{INTAK}}$	QS1
25	ASTB	QS0
26	$\overline{\text{BUFEN}}$	BS0
27	BUF $\overline{\text{R}}$/W	BS1
28	IO/$\overline{\text{M}}$	BS2
29	$\overline{\text{WR}}$	$\overline{\text{BUSLOCK}}$
30	HLDAK	$\overline{\text{RQ}}$/$\overline{\text{AK1}}$
31	HLDRQ	$\overline{\text{RQ}}$/$\overline{\text{AK0}}$
34	LBS0	HIGH LEVEL

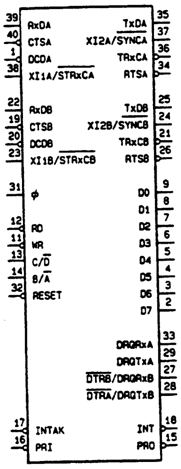
A8-A15 ; ADDRESS BUS OUTPUTS
AD0-AD7 ; ADDRESS/DATA BUS INPUTS/OUTPUTS
NMI ; NON-MASKABLE INTERRUPT INPUT
INT ; MASKABLE INTERRUPT INPUT
ϕ ; CLOCK INPUT
$\overline{\text{INTAK}}$; INTERRUPT ACKNOWLEDGE OUTPUT
ASTB ; ADDRESS STROBE OUTPUT
$\overline{\text{BUFEN}}$; BUFFER ENABLE OUTPUT
BUF$\overline{\text{R}}$/W ; BUFFER $\overline{\text{READ}}$/WRITE OUTPUT
IO/$\overline{\text{M}}$; IO/MEMORY OUTPUT
$\overline{\text{WR}}$; WRITE STROBE OUTPUT
HLDAK ; HOLD ACKNOWLEDGE OUTPUT
HLDRQ ; HOLD REQUEST INPUT
$\overline{\text{RD}}$; READ STROBE OUTPUT
S/$\overline{\text{LG}}$; SMALL/$\overline{\text{LARGE}}$ INPUT
LBS0 ; LATCHED BUS STATUS 0 OUTPUT
A16/PS0-A19/PS3 ; ADDRESS BUS/PROCESSOR STATUS OUTPUTS
QS0 ,1 ; QUEUE STATUS OUTPUTS
BS0-BS2 ; BUS STATUS OUTPUTS
$\overline{\text{BUSLOCK}}$; BUS LOCK OUTPUT
$\overline{\text{RQ}}$/$\overline{\text{AK0}}$,1 ; HOLD REQUEST/ACKNOWLEDGE INPUTS/OUTPUTS

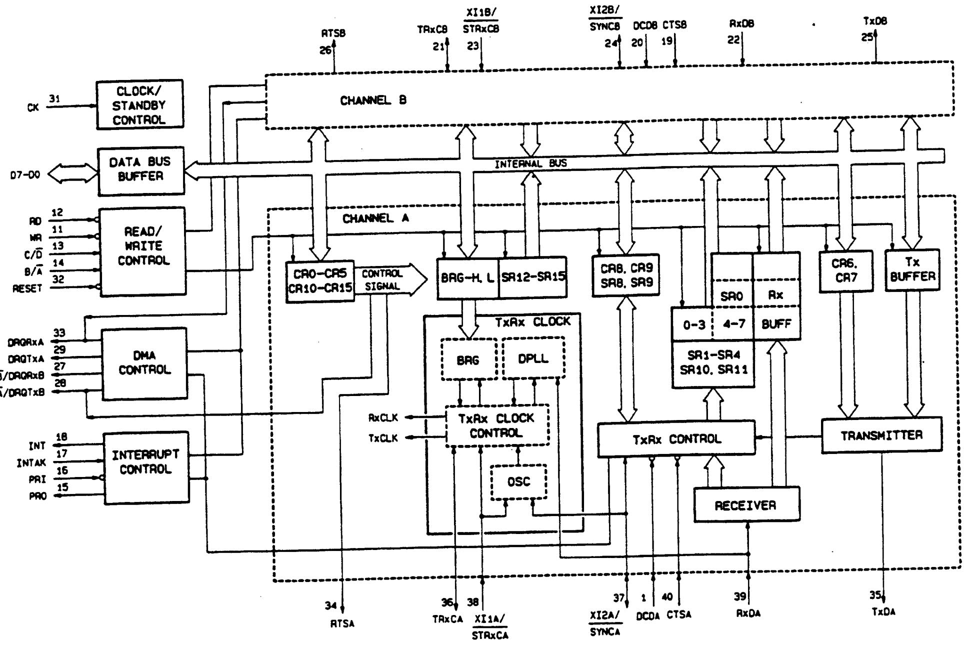


INTERNAL ADDRESS/DATA BUS (20)
BUS BUFFER
12
A16/PS0-A19/PS3
A8-A15
8
AD0-AD7
ADM
STATUS CONTROL
8
LBS0
BUFEN (BS0), BUFR/W (BS1)
IO/M (BS2)
ATSB (QS0), INTAK (QS1)
RD, WR (BUSLOCK)
S/LG
READY
RESET
POLL
PS
SS
DS0
DS1
PFP
DP
TEMP
Q0
Q1
Q2
Q3
T-STATE CONTROL
BUS HOLD CONTROL
HLDRQ (RQ/AK0)
HLDAK (RQ/AK1)
CYCLE DECISION
INTERRUPT CONTROL
NMI
INT
QUEUE CONTROL
STANDBY CONTROL
ϕ
BCU
EXU
LC
PC
AW
BW
CW
DW
IX
IY
BP
SP
EFFECTIVE ADDRESS GENERATOR
μADDRESS REGISTER
μINSTRUCTION STORAGE
MICRO DATA BUS
μSEQUENCE CONTROL
INSTRUCTION DECODER
QUEUE DATA BUS (8)
MAIN DATA BUS (16)
SUB DATA BUS (16)
TC
TA
TB
SHIFTER
(ALU)
ARITHMETIC LOGIC UNIT
PSW

uPD72001C (NEC)
C-MOS ADVANCED MULTI-PROTOCOL SERIAL CONTROLLER
— TOP VIEW —


DCDA IN 1
D7 IN/OUT 2
D6 IN/OUT 3
D5 IN/OUT 4
D4 IN/OUT 5
D3 IN/OUT 6
D2 IN/OUT 7
D1 IN/OUT 8
D0 IN/OUT 9
10 GND
WR IN 11
RD IN 12
C/D IN 13
B/A IN 14
PRO OUT 15
PRI IN 16
INTAK IN 17
INT OUT 18
CTSB IN 19
DCDB IN 20
40 CTSA IN
39 RxDA IN
38 XI1A/STRxCA IN
37 XI2A/SYNCA IN/OUT
36 TRxCA IN/OUT
35 TxDA OUT
34 RTSA OUT
33 DRQRxA OUT
32 RESET IN
31 CK IN
30 VDD (+5V)
29 DRQTxA IN/OUT
28 DTRA/DRQTxB OUT
27 DTRB/DRQRxB OUT
26 RTSB OUT
25 TxDB OUT
24 XI2B/SYNCB IN/OUT
23 XI1B/STRxCB IN
22 RxDB IN
21 TRxCB IN/OUT


39 RxDA
40 CTSA
1 DCDA
38 XI1A/STRxCA
22 RxDB
19 CTSB
20 DCDB
23 XI1B/STRxCB
31 φ
12 RD
11 WR
13 C/D
14 B/A
32 RESET
17 INTAK
16 PRI
TxDA 35
XI2A/SYNCA 37
TRxCA 36
RTSA 34
TxDB 25
XI2B/SYNCB 24
TRxCB 21
RTSB 26
D0 9
D1 8
D2 7
D3 6
D4 5
D5 4
D6 3
D7 2
DRQRxA 33
DRQTxA 29
DTRB/DRQRxB 27
DTRA/DRQTxB 28
INT 18
PRO 15


RTSB 26
TRxCB 21
XI1B/STRxCB 23
XI2B/SYNCB 24
DCDB 20
CTSB 19
RxDB 22
TxDB 25
CK 31
CLOCK/STANDBY CONTROL
D7-D0
DATA BUS BUFFER
INTERNAL BUS
CHANNEL B
CHANNEL A
RD 12
WR 11
C/D 13
B/A 14
RESET 32
READ/WRITE CONTROL
CR0-CR5 CR10-CR15
CONTROL SIGNAL
BRG-H, L
SR12-SR15
CR8, CR9 SR8, SR9
SR0
0-3
4-7
Rx BUFF
CR6, CR7
Tx BUFFER
TxRx CLOCK
BRG
DPLL
SR1-SR4 SR10, SR11
DRQRxA 33
DRQTxA 29
DTRB/DRQRxB 27
DTRA/DRQTxB 28
DMA CONTROL
RxCLK
TxCLK
TxRx CLOCK CONTROL
TxRx CONTROL
TRANSMITTER
OSC
RECEIVER
INT 18
INTAK 17
PRI 16
PRO 15
INTERRUPT CONTROL
34 RTSA
36 TRxCA
38 XI1A/STRxCA
37 XI2A/SYNCA
1 DCDA
40 CTSA
39 RxDA
35 TxDA

INPUTS				FUNCTION	
WR	RD	B/A	C/D		
0	1	0	0	CHANNEL A	WRITE (TxD)
		1		CHANNEL B	
1	0	0	0	CHANNEL A	READ (RxD)
		1		CHANNEL B	
0	1	0	1	CHANNEL A	WRITE (CONTROL REGISTER)
		1		CHANNEL B	
1	0	0	1	CHANNEL A	READ (STATUS REGISTER)
		1		CHANNEL B	
1	1	X	X	HIGH-IMPEDANCE	
0	0	X	X	INHIBIT	

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE.

CK : SYSTEM CLOCK INPUT
WR : WRITE ENABLE INPUT
RD : READ ENABLE INPUT
B/$\overline{A}$: CHANNEL B/$\overline{A}$ SELECT INPUT
C/$\overline{D}$: CONTROL/$\overline{DATA}$ SELECT INPUT
D0-D7 : DATA BUS INPUTS/OUTPUTS
INT : INTERRUPT OUTPUT
INTAK : INTERRUPT ACKNOWLEDGE INPUT
PRI : PRIORITY INPUT
DRQTxA: DMA REQUEST TxA OUTPUT
DRQRxA: DMA REQUEST RxA OUTPUT
PRO : PRIORITY OUTPUT

$\overline{DTRA}$/DRQTxB: DATA TERMINAL READY A/DMA REQUEST TxB OUTPUT
$\overline{DTRB}$/DRQRxB: DATA TERMINAL READY B/DMA REQUEST RxB OUTPUT
CTSA, CTSB : CLEAR TO SEND A/B INPUT
DCDA, DCDB : DATA CARRIER DETECT A/B INPUT
RTSA, RTSB : REQUEST TO SEND A/B OUTPUT
RESET : RESET INPUT

SECTION D
REPLACEABLE PARTS AND OPTIONAL FIXTURE

補修用部品注意事項

(1) 安全重要部品

> 回路図，分解図，電気部品表中，⚠ 印及び ▨ で囲まれた部品は安全性を維持するために重要な部品です。従ってこれらの部品を交換するときには必ず指定の部品と交換して下さい。

(2) 部品の共通化

ソニーから供給される部品はセットに実装されているものと異なることがあります。これは部品の共通化，改良等によるものです。

分解図や電気部品表には現時点での共通化された部品が記載されています。

(3) 部品の変更

部品の変更に関する情報は第E章「CHANGED PARTS」を参照して下さい。

(4) 部品の在庫

部品表のSP (Supply code) 欄にoで示される部品は交換頻度が低い部品ですので在庫していないことがあり，納期が長くなることがあります。

(5) コンデンサー，インダクター，抵抗の単位

回路図，分解図，電気部品表中，特に明記したものを除き，下記の単位は省略されています。

コンデンサー：μF
インダクター：μH
抵抗　　　　：Ω

Notes on Repair Parts

(1) Safety Related Components Warning

> Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Standardization of Parts

Repair parts supplied from Sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".

This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present".

(3) Change of Parts

Regarding engineering parts changes, refer to Section E. "CHANGED PARTS".

(4) Stock of Parts

Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

(5) Units for Capacitors, Inductors and Resistors

The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.

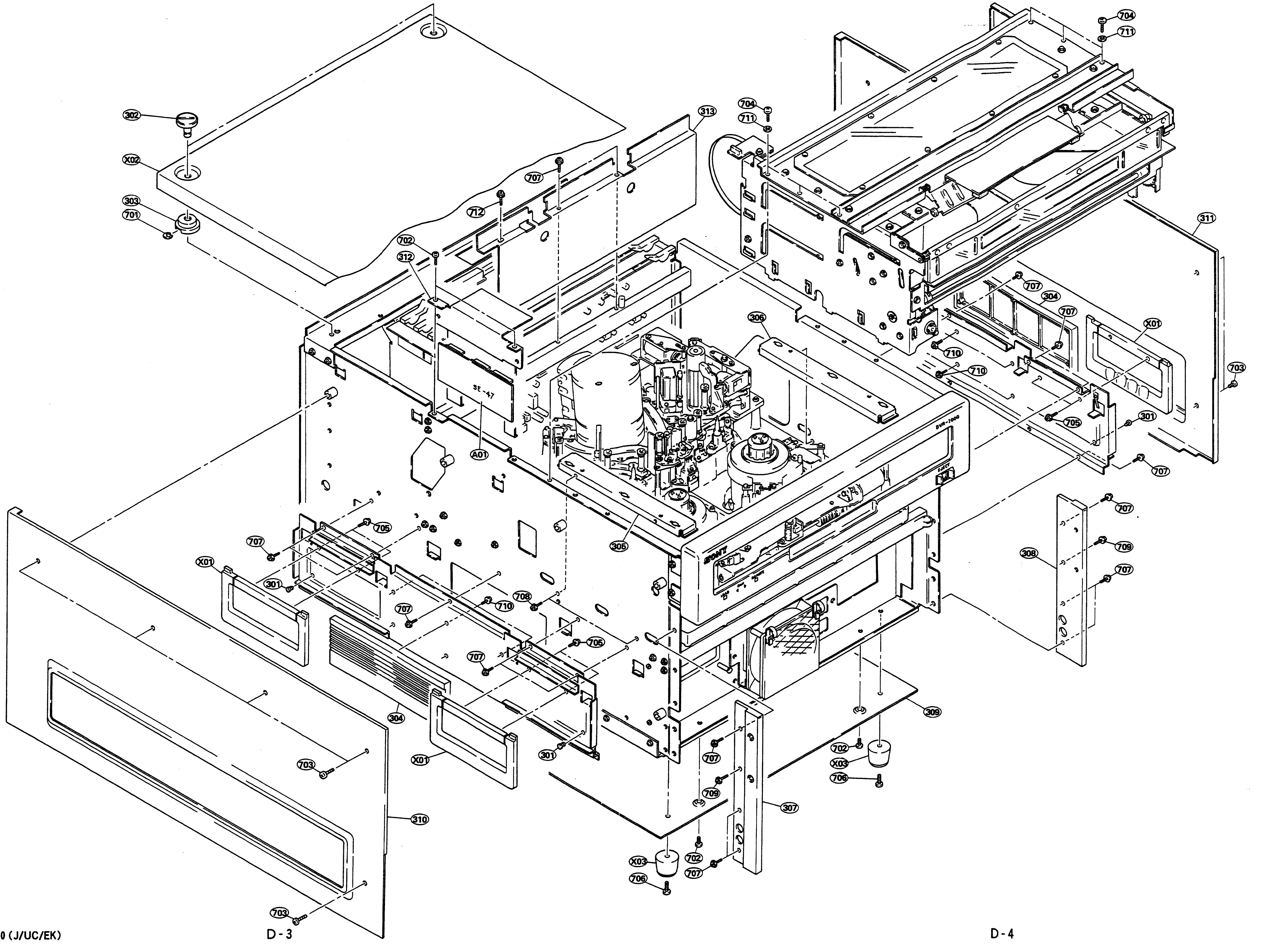
Capacitors: μF
Inductors: μH
Resistors: ohm

MAIN ASS' Y

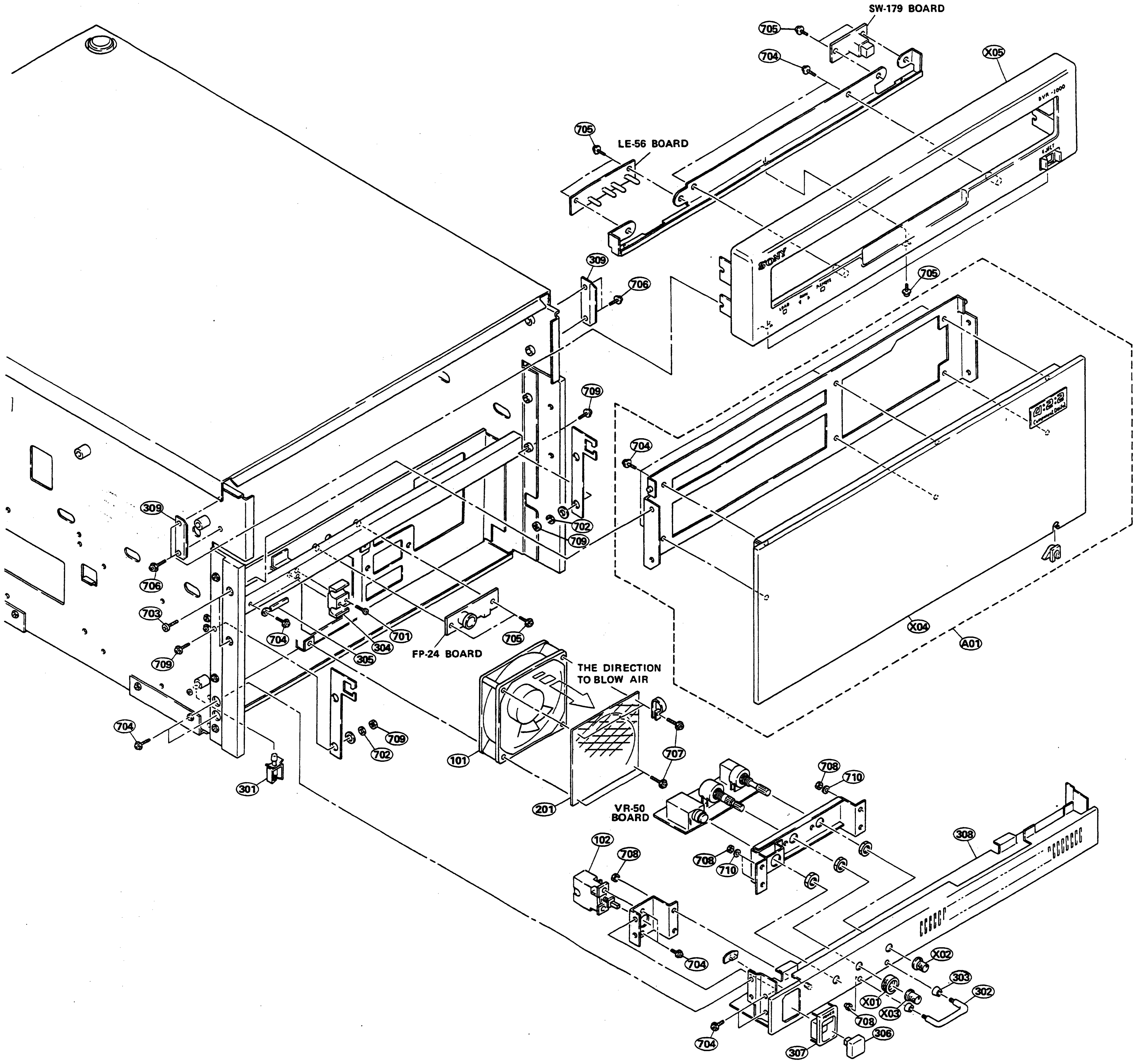
MAIN ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A-6025-112-A	o	COMPLETE PCB, SE-47
X01	X-3715-496-1	o	HANDLE ASSY
X02	X-3715-356-1	o	PLATE ASSY, TOP
X03	X-4836-202-X	s	FOOT ASSY
301	3-642-047-00	o	STOP, HANDLE
302	3-715-307-01	o	STOPPER, UPPER LID
303	3-715-308-01	o	SPACER, UPPER LID
304	3-715-612-01	o	PLATE, ORNAMENTAL
305	3-715-636-01	o	PLATE (LEFT), ADJUSTMENT
306	3-715-637-01	o	PLATE (RIGHT), ADJUSTMENT
307	3-715-639-01	o	PANEL (LEFT), SIDE
308	3-715-640-01	o	PANEL (RIGHT), SIDE
309	3-715-673-01	o	PLATE, BOTTOM
310	3-715-698-01	o	PLATE, OUTER, LEFT
311	3-715-699-01	o	PLATE, OUTER, RIGHT
312	3-715-808-02	o	COVER, SE-47 PC BOARD
313	3-716-720-01	o	PLATE, SHIELD, RF
701	7-624-106-04	s	STOP RING 3.0, TYPE-E
702	7-682-547-09	s	SCREW, +B 3X6
703	7-682-562-04	s	SCREW, +B 4X10
704	7-682-648-09	s	SCREW, +PS 3X8
705	7-682-660-09	s	SCREW, +PS 4X6
706	7-682-666-09	s	SCREW, +PS 4X20
707	7-682-903-11	s	SCREW, +PWH 3X6
708	7-682-947-01	s	SCREW, +PSW 3X6
709	7-682-950-01	s	SCREW, +PSW 3X12
710	7-685-645-79	s	SCREW, +BVTP 3X6, TYPE2 SLIT
711	7-688-003-01	s	W3, SMALL
712	7-682-948-01	s	SCREW, +PSW 3X8

MAIN ASS' Y MAIN ASS' Y


302
X02
303
701
313
707
712
702
312
SE-47
A01
704
711
704
711
311
707
304
707
X01
703
306
710
710
705
301
707
DVR-1000
305
SONY
707
709
707
308
705
707
X01
301
707
710
708
705
707
304
X01
301
703
310
703
309
702
X03
706
707
709
307
702
X03
706
707

FRONT PANEL ASS' Y FRONT PANEL ASS' Y


SW-179 BOARD
705
704
X05
DVR-1000
EJECT
SONY
705
LE-56 BOARD
705
309
706
709
704
702
709
309
706
703
709
704
704
701
304
305
FP-24 BOARD
705
X04
A01
THE DIRECTION TO BLOW AIR
709
702
101
707
201
301
VR-50 BOARD
708
710
308
708
710
102
708
704
X02
303
302
X01
X03
708
704
306
307

FRONT PANEL ASSEMBLY, DVR-1000

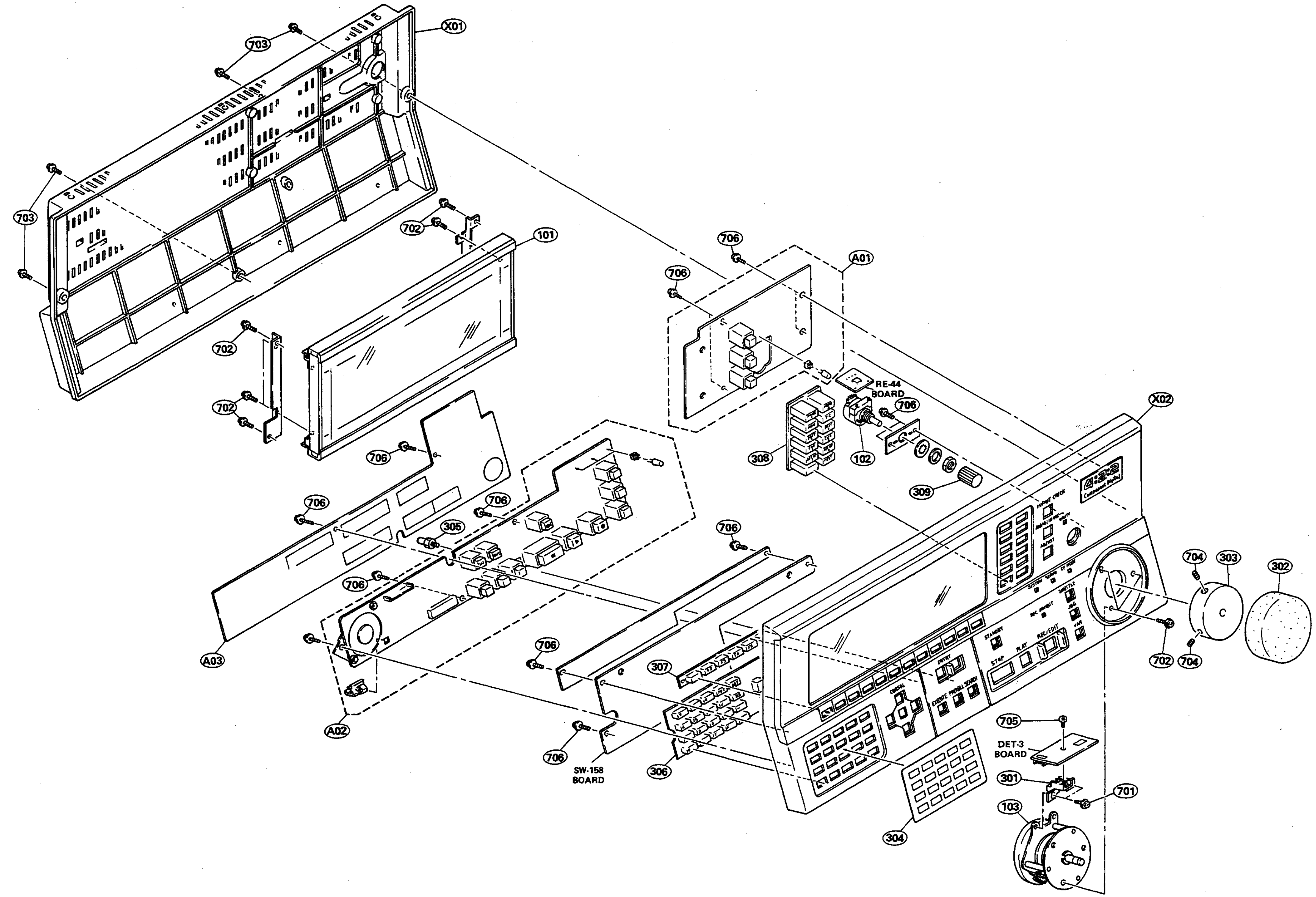
No.	Part No.	SP	Description
A01	A-6003-028-A	o	PANEL (A) ASSY, BLANK
X01	X-3715-497-1	s	KNOB (W) ASSY, VOLUME
X02	X-3715-499-1	s	KNOB (1) ASSY, VOLUME
X03	X-3715-498-1	s	KNOB (2) ASSY, VOLUME
X04	X-3715-395-1	o	PANEL (A) ASSY, BLANK
X05	X-3715-396-1	o	ESCUTCHEON ASSY
101	1-541-436-11	s	MOTOR, DC FAN
102	1-570-052-11	s	SWITCH, PUSH (AC POWER)
201	2-252-609-00	o	COVER, FAN
301	3-655-214-00	o	CLIP, CABLE
302	3-657-653-00	o	ARM, GUARD
303	3-657-654-00	o	RING, ORNAMENTAL
304	3-686-244-01	o	CLAMP, CABLE
305	3-701-822-00	o	HOLDER, WIRE
306	3-715-610-01	s	KNOB, PS
307	3-715-611-03	o	GUARD, PS
308	3-715-819-01	o	PANEL, FRONT
309	3-716-713-01	o	STOPPER, ESCUTCHEON
701	7-621-773-95	s	SCREW, +B 2.6X6
702	7-623-208-22	s	SW3, TYPE-2
703	7-682-548-09	s	SCREW, +B 3X8
704	7-682-903-11	s	SCREW, +PWH 3X6
705	7-682-947-01	s	SCREW, +PSW 3X6
706	7-682-948-01	s	SCREW, +PSW 3X8
707	7-682-969-01	s	SCREW, +PSW 4X35
708	7-684-023-04	s	N 3, TYPE-2
709	7-686-250-01	s	SCREW, +PWH 3X12
710	7-688-003-11	s	W3, MIDDLE

FUNCTION CONTROL PANEL ASS' Y

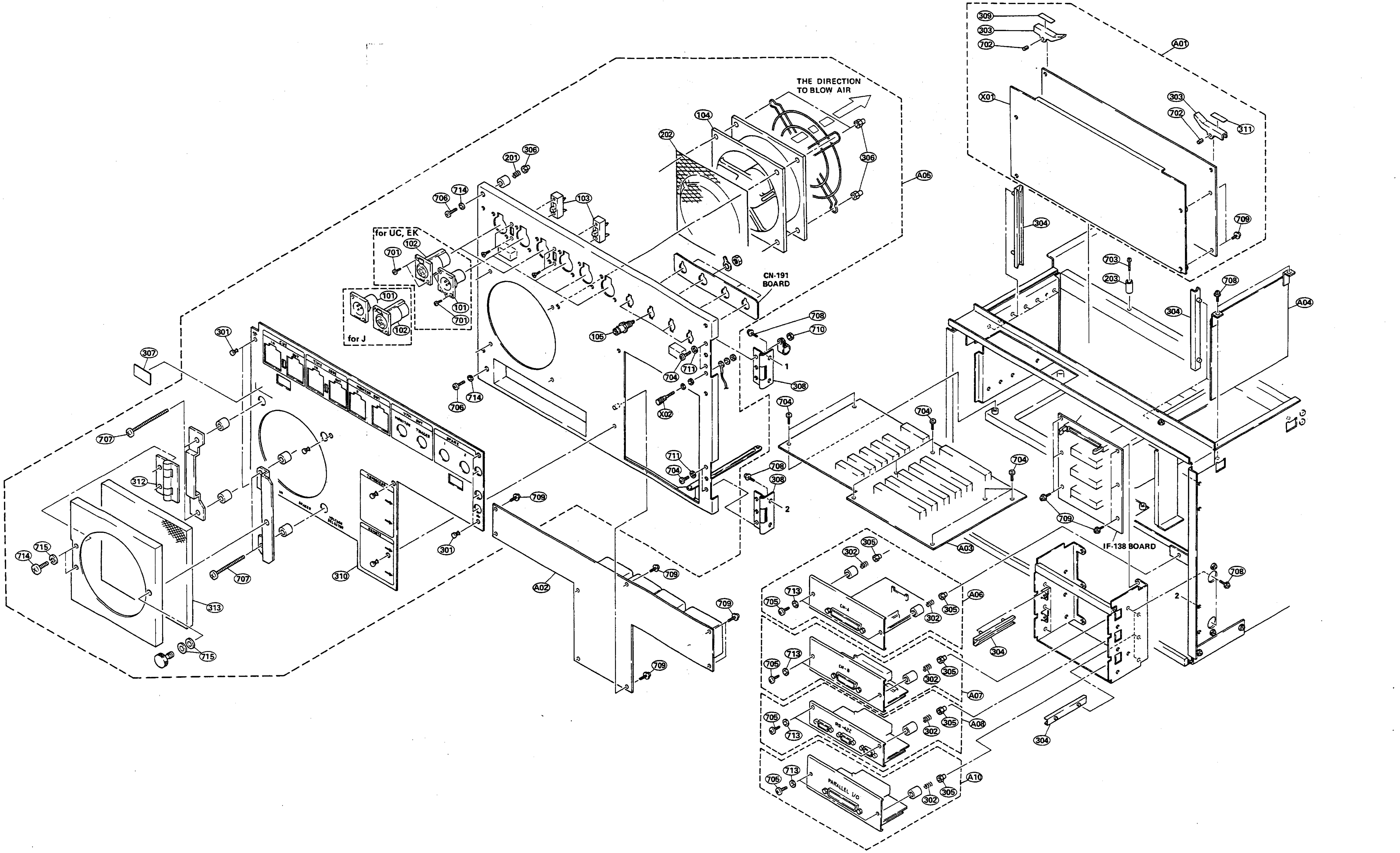
FUNCTION CONTROL PANEL ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A-6017-142-A	o	COMPLETE PCB, PS-139
A02	A-6017-143-A	o	COMPLETE PCB, SW-157
A03	A-6017-145-A	o	COMPLETE PCB, CP-106
X01	X-3715-386-2	o	PLATE ASSY, BOTTOM
X02	X-3715-387-1	o	PANEL ASSY, CONTROL
101	1-464-765-12	s	DISPLAY UNIT, EL
102	1-464-779-11	s	ENCODER, ROTARY
103	1-515-618-12	s	CLUTCH, ELECTOMAGNETIC
301	3-673-694-00	o	HOLDER, DME
302	3-714-595-01	o	KNOB, DIAL
303	3-714-596-01	o	DIAL
304	3-715-861-01	o	SHEET, PANEL
305	3-715-863-04	o	SUPPORT, PC BOARD
306	3-715-864-01	s	KEY, TEN
307	3-715-865-01	s	KEY, SELECT
308	3-715-866-01	s	KEY, MENU
309	3-715-869-01	o	KNOB, VOLUME
701	7-621-759-45	s	SCREW, +PSW 2.6X6
702	7-682-947-01	s	SCREW, +PSW 3X6
703	7-682-948-01	s	SCREW, +PSW 3X8
704	7-683-238-01	s	SET SCREW, FLAT POINT 3X4
705	7-685-533-14	s	SCREW, +BTP 2.6X6
706	7-685-903-11	s	SCREW, +PTPWH 3X6

FUNCTION CONTROL PANEL ASS' Y FUNCTION CONTROL PANEL ASS' Y


X01
703
703
702
101
702
702
706
706
A01
706
RE-44
BOARD
706
X02
308
102
309
706
706
305
706
A03
706
A02
706
307
SW-158
BOARD
306
704
303
302
702
704
705
DET-3
BOARD
301
701
103
304
STANDBY
PLAY
STOP
REC/EDIT
SHUTTLE
JOG
VAR

REAR PANEL ASS' Y REAR PANEL ASS' Y



309
303
702
A01
X01
303
702
311
709
304
703
203
708
304
A04
THE DIRECTION TO BLOW AIR
104
202
306
A05
201
306
714
706
103
for UC, EK
102
701
101
102
101
701
for J
CN-191 BOARD
708
710
1
308
105
704
711
X02
706
714
301
307
707
312
711
704
708
308
2
704
704
704
709
A03
IF-138 BOARD
709
313
714
715
715
707
310
301
A02
709
709
709
302
305
713
705
A06
302
305
304
708
2
713
705
302
305
A07
705
713
302
305
A08
304
705
713
A10
302
305

REAR PANEL ASSEMBLY, DVR-1000

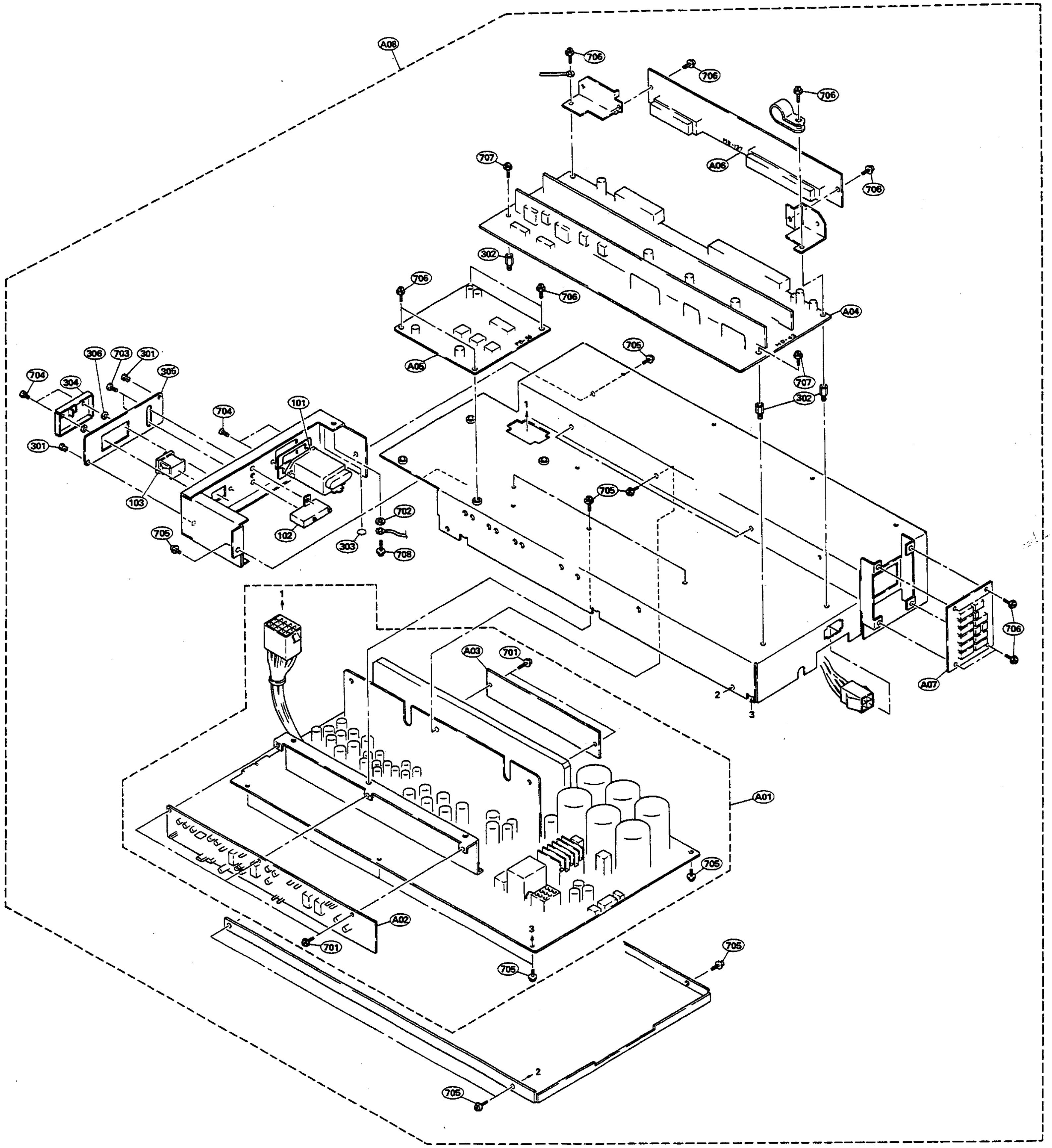
No.	Part No.	SP	Description
A01	A−6011−114−A	o	COMPLETE PCB, RF−15
	A−6013−084−A	o	COMPLETE PCB, AE−05
	A−6015−104−A	o	COMPLETE PCB, CD−35
	A−6015−105−A	o	COMPLETE PCB, RS−23
	A−6017−140−A	o	COMPLETE PCB, SP−01
	A−6017−150−A	o	COMPLETE PCB, SY−124
A02	A−6013−082−A	o	COMPLETE PCB, LO−05
A03	A−6025−108−A	o	COMPLETE PCB, MB−133
A04	A−6025−113−A	o	COMPLETE PCB, TR−40
A05	A−6032−065−B	o	PANEL (1) ASSY, REAR (for J)
	A−6032−066−B	o	PANEL (1) ASSY, REAR (for UC, EK)
A06	A−6032−069−A	o	PANEL ASSY, CN−A
A07	A−6032−070−A	o	PANEL ASSY, CN−B
A08	A−6032−081−A	o	PANEL (B) ASSY, RS−422
A10	A−6032−080−A	o	PANEL ASSY, PARALLEL I/O
X01	X−3715−349−1	s	PLATE ASSY, SHIELD, SUB
X02	X−4854−207−0	s	TERMINAL ASSY, GROUND
101	1−509−176−51	s	RECEP, XLR 3P, MALE
102	1−509−184−51	s	RECEP, XLR 3P, FEMALE
103	1−514−524−00	s	SWITCH, SLIDE
104	1−541−437−11	s	MOTOR, DC FAN
105	1−561−781−21	s	RECEP, BNC
201	2−083−308−00	s	SPRING
202	2−369−812−11	o	COVER, FUN
203	2−387−010−01	o	SPACER
204	2−390−741−00	o	BUSHING, RUBBER
301	3−531−576−11	o	RIVET
302	3−576−921−00	s	SPRING, COMPRESSION
303	3−673−249−00	o	LEVER, PC BOARD
304	3−673−676−01	o	RAIL, GUIDE, CHASSIS
305	3−680−316−00	s	NUT 4, STOPPER
306	3−680−316−11	o	NUT 4, STOPPER
307	3−703−043−51	s	LABEL, CAUTION, MAIN
308	3−715−517−01	o	HINGE, PARALLEL
309	3−715−590−01	o	LABEL, SERIAL NUMBER (RF−15)
	3−715−590−11	o	LABEL, SERIAL NUMBER (AE−05)
	3−715−590−21	o	LABEL, SERIAL NUMBER (CD−35)
	3−715−590−31	o	LABEL, SERIAL NUMBER (RS−23)
	3−715−590−41	o	LABEL, SERIAL NUMBER (SP−01)
	3−715−590−61	o	LABEL, SERIAL NUMBER (SY−124)
310	3−715−703−04	o	LABEL, REAR PANEL
311	3−715−590−71	o	LABEL, SERIAL NUMBER (SY−124)
312	3−651−803−00	o	HINGE, PC BOARD
313	3−735−190−01	s	FILTER, AIR
701	7−621−770−67	s	SCREW, +B 2.6X6
702	7−626−320−11	o	PIN, SPRING 3X8
703	7−628−254−95	s	SCREW, +PS 2.6X14
704	7−682−547−09	s	SCREW, +B 3X6
705	7−682−565−09	s	SCREW, +B 4X16
706	7−682−567−09	s	SCREW, +B 4X25
707	7−682−572−09	s	SCREW, +B 4X50
708	7−682−903−11	s	SCREW, +PWH 3X6
709	7−682−947−01	s	SCREW, +PSW 3X6
710	7−684−023−04	s	N 3, TYPE 2
711	7−688−003−01	s	W 3, SMALL
712	7−688−004−01	s	W 4, SMALL
713	7−688−004−12	s	W 4, MIDDLE
714	7−682−545−09	s	SCREW, +B 3X4
715	7−688−003−12	s	W3

POWER ASS' Y

POWER ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A−6023−039−A	o	COMPLETE PCB, PS−138
A02	A−6023−040−A	o	COMPLETE PCB, RE−32
A03	A−6023−041−A	o	COMPLETE PCB, CT−74
A04	A−6023−042−A	o	COMPLETE PCB, MD−43
A05	A−6023−043−A	o	COMPLETE PCB, PD−36
A06	A−6023−044−A	o	COMPLETE PCB, MB−137
A07	A−6026−071−A	o	COMPLETE PCB, FC−37
A08	A−6038−029−A	o	POWER ASSY
101	⚠1−526−956−11	s	INLET, AC (NOISE FILTER)
102	⚠1−532−545−51	s	BREAKER, CIRCUIT
103	⚠1−554−011−00	s	SWITCH, ROCKER
301	3−531−576−11	o	RIVET
302	3−657−845−00	o	BRACKET, PC BOARD
303	3−701−699−00	o	LABEL, GROUND TERMINAL
304	3−715−524−02	o	COVER
305	3−715−525−02	o	LABEL, POWER
306	3−715−526−01	o	WASHER 3
701	7−621−759−45	s	SCREW, +PSW 2.6X6
702	7−623−423−07	s	LW 4, TYPE B
703	7−682−547−09	s	SCREW, +B 3X6
704	7−682−549−09	s	SCREW, +B 3X10
705	7−682−903−11	s	SCREW, +PWH 3X6
706	7−682−947−01	s	SCREW, +PSW 3X6
707	7−682−948−01	s	SCREW, +PSW 3X8
708	7−682−961−01	s	SCREW, +PSW 4X8

POWER ASS'Y POWER ASS'Y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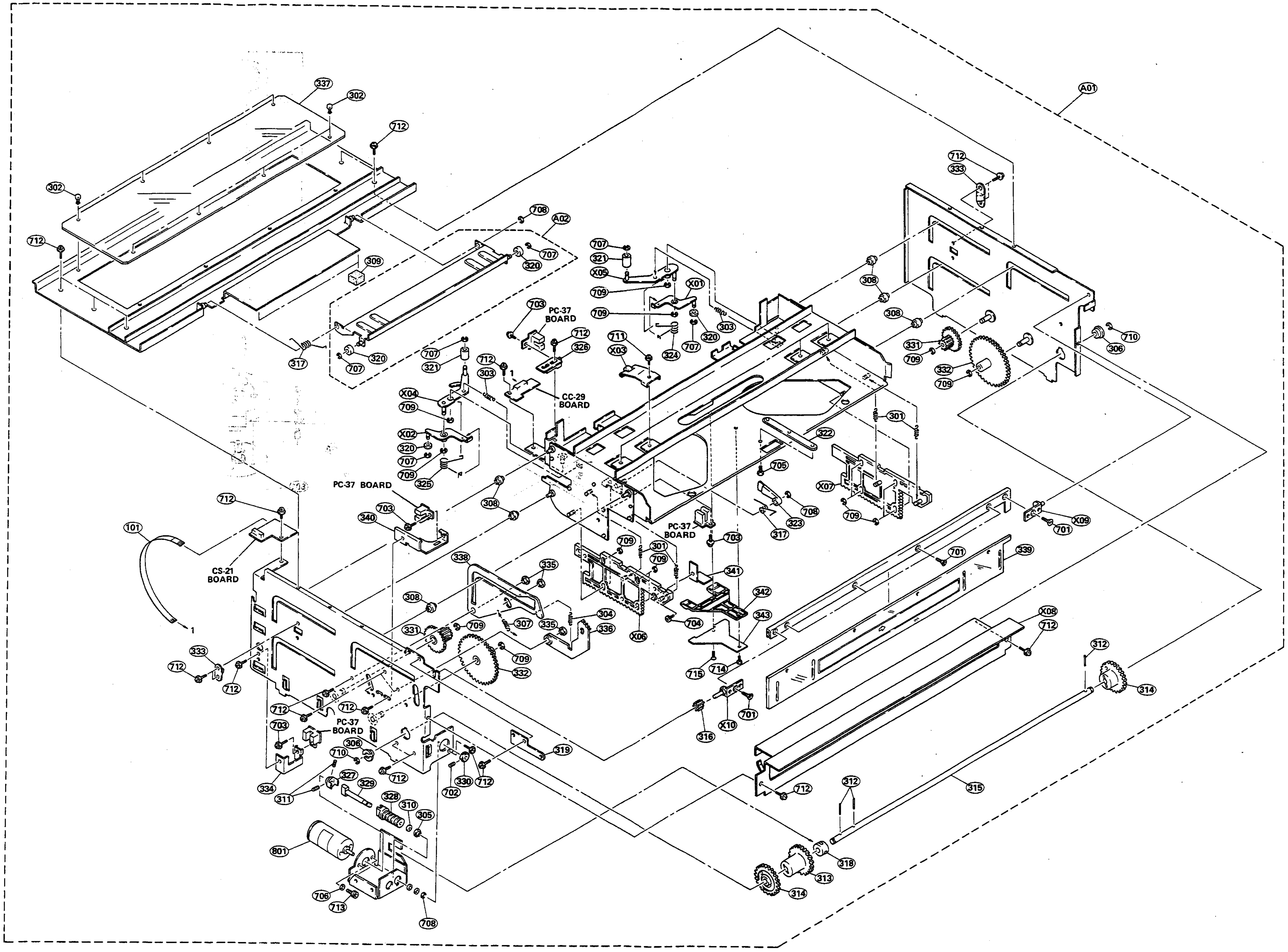
CASSETTE COMPARTMENT ASS' Y

CASSETTE COMPARTMENT ASS' Y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CC-29 BOARD
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PC-37 BOARD
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CS-21 BOARD
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PC-37 BOARD
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PC-37 BOARD
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CASSETTE COMPARTMENT ASSEMBLY, DVR-1000

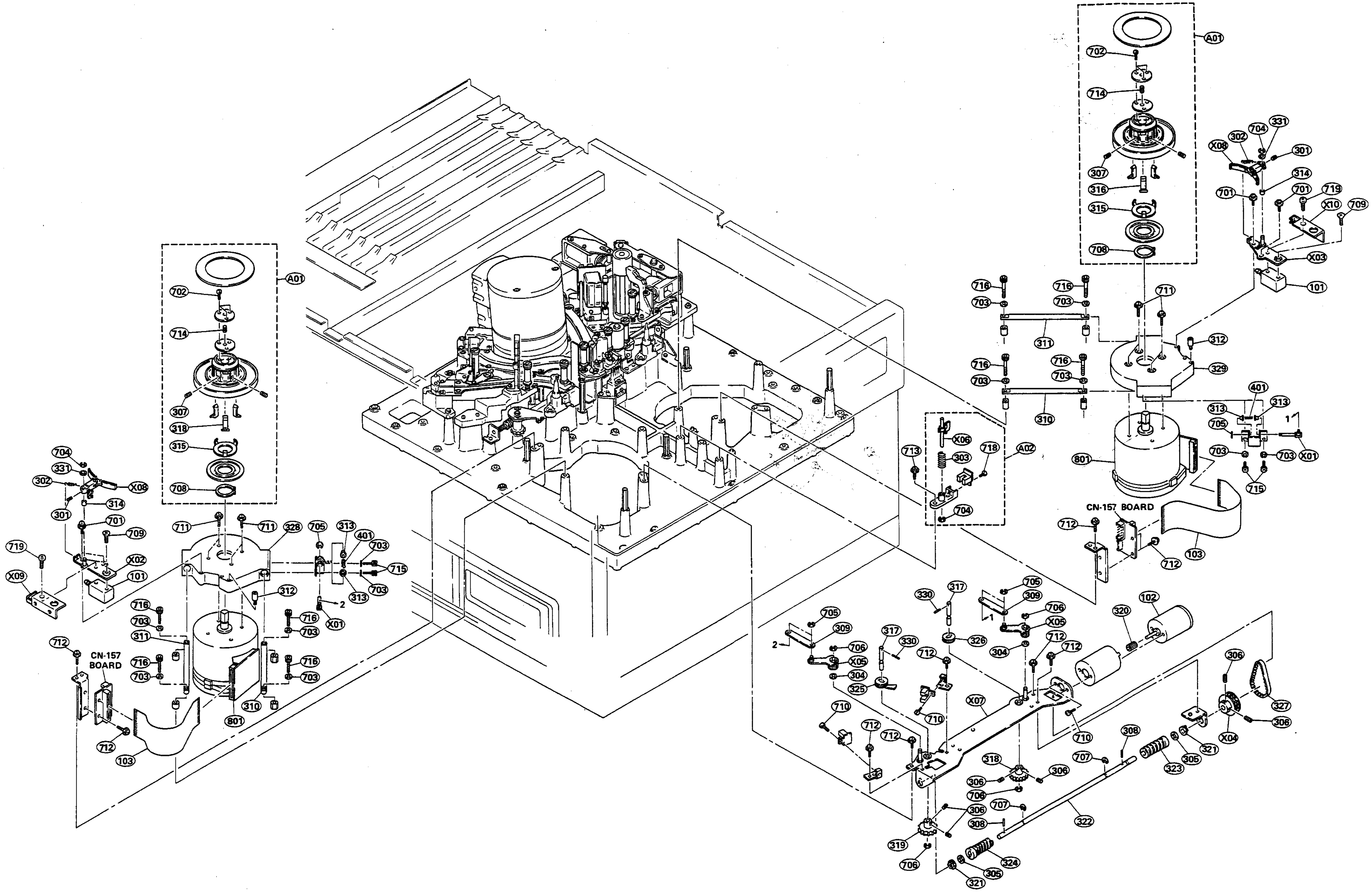
No.	part No.	SP	Description
A01	A-6028-008-A	s	CASSETTE COMPARTMENT COMP ASSY
A02	A-6028-007-A	o	PLATE ASSY, STOPPER
X01	X-3715-333-1	o	LEVER ASSY, PUSH-OUT, RIGHT
X02	X-3715-334-1	o	LEVER ASSY, PUSH-OUT, LEFT
X03	X-3715-335-1	o	ROLLER ASSY, STOPPER
X04	X-3715-336-1	o	ARM (LEFT) ASSY, PUSH-OUT
X05	X-3715-337-1	o	ARM (RIGHT) ASSY, PUSH-OUT
X06	X-3715-338-3	o	RACK (LEFT) ASSY
X07	X-3715-339-3	o	RACK (RIGHT) ASSY
X08	X-3715-346-3	o	PLATE (A) ASSY, FRONT
X09	X-3715-390-1	o	PLATE (RIGHT) ASSY, SHAFT
X10	X-3715-391-1	o	PLATE (LEFT) ASSY, SHAFT
101	1-559-046-11	s	WIRE, FLEXIBLE CARD 4P
301	3-497-257-03	s	SPRING, TENSION
302	3-531-576-11	o	RIVET
303	3-542-475-00	s	SPRING, TENSION
304	3-563-103-00	s	SPRING, TENSION
305	3-642-569-00	o	BEARING, DIA.3
306	3-642-595-03	s	BEARING (6)
307	3-643-344-00	s	SPRING, TENSION
308	3-668-299-00	s	ROLLER, GUIDE
309	3-672-926-00	o	CUSHION, LID
310	3-701-439-01	s	WASHER
311	3-701-505-00	s	SET SCREW, DOUBLE POINT 3X3
312	3-703-358-06	s	PIN, PARALLEL (DIA. 2X14)
313	3-715-538-01	s	WHEEL, WORM
314	3-715-539-01	s	GEAR (C)
315	3-715-540-01	o	SHAFT, DRIVING
316	3-715-541-01	s	GEAR, LID
317	3-715-542-01	o	SPRING
318	3-715-543-01	s	COLLAR, JOINT SHAFT
319	3-715-545-01	o	PLATE, FIXED, LID SHAFT
320	3-715-546-01	o	ROLLER, PUSH-OUT
321	3-715-547-01	s	ROLLER (2), PUSH-OUT
322	3-715-549-01	o	RAIL, GUIDE, CENTERING
323	3-715-550-01	o	SHUTTER, SENSOR
324	3-715-551-01	o	SPRING (RIGHT)
325	3-715-552-01	o	SPRING (LEFT)
326	3-715-553-01	o	BRACKET, IN SW
327	3-715-572-01	o	RING, CUP
328	3-715-573-01	s	GEAR, WORM
329	3-715-574-01	o	SHAFT, WORM GEAR
330	3-715-575-01	o	WHEEL, DRIVING
331	3-715-576-01	s	GEAR (A)
332	3-715-577-01	s	GEAR (B)
333	3-715-578-01	s	CAM, PUSH-OUT
334	3-715-579-01	o	BRACKET, SENSOR, DOWN
335	3-715-580-01	o	SHAFT, LID OPEN CAM
336	3-715-581-02	o	ARM, LID SWITCHING
337	3-715-655-03	o	COVER
338	3-715-657-01	o	CAM, LID OPEN
339	3-715-658-03	o	LID, CASSETTE COMPARTMENT
340	3-715-888-02	o	BRACKET, UP SENSOR
341	3-715-894-01	o	PLATE, SENSOR, UP
342	3-716-773-01	o	GUIDE, CASSETTE COMPARTMENT
343	3-716-774-01	o	RETAINER, GUIDE
701	7-621-592-10	s	SCREW, +K 2.6X8
702	7-621-733-08	s	SET SCREW, FLAT POINT 2X4
703	7-621-759-35	s	SCREW, +PSW 2.6X5
704	7-621-772-20	s	SCREW, +B 2X5
705	7-621-775-10	s	SCREW, +B 2.6X4
706	7-623-208-22	s	SW 3, TYPE 2
707	7-624-102-04	s	STOP RING 1.5, TYPE-E
708	7-624-105-04	s	STOP RING 2.3, TYPE-E
709	7-624-106-04	s	STOP RING 3.0, TYPE-E
710	7-624-109-04	s	STOP RING 5.0, TYPE-E
711	7-682-903-01	s	SCREW, +PWH 3X5
712	7-682-903-11	s	SCREW, +PWH 3X6
713	7-683-402-04	s	SCREW, C 3X5
714	7-621-592-00	s	SCREW, +B 2.6X6
715	7-621-773-95	s	SCREW, +K 2.6X6
801	8-835-047-01	s	MOTOR, DC (MNR-4000A)

REEL TABLE ASS' Y

REEL TABLE ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A-6029-005-A	o	TABEL ASSY, REEL
A02	A-6029-014-B	o	PIN ASSY, UB
X01	X-3715-301-1	o	ROD ASSY, LIMITER
X02	X-3715-302-1	o	PLATE ASSY, BRAKE, S
X03	X-3715-303-1	o	PLATE ASSY, BRAKE, T
X04	X-3715-304-1	o	PULLEY (L) ASSY, TIMING
X05	X-3715-305-1	o	ARM ASSY, CRANK
X06	X-3715-307-1	o	FLAG ASSY, UB
X07	X-3715-342-1	o	BEARING ASSY, CRANK
X08	X-3715-393-1	s	ARM ASSY, BRAKE
X09	X-3715-487-1	o	SPRING ASSY (S) RETURN
X10	X-3715-488-1	o	SPRING ASSY (T) RETURN
101	1-454-433-12	s	SOLENOID, PLUNGER
102	1-541-376-11	s	MOTOR, DC (DNR-4700A)
103	1-559-045-11	s	WIRE, FLEXIBLE CARD 26P
301	3-302-492-00	s	SPRING, COMPRESSION
302	3-554-091-00	s	SPRING, TENSION
303	3-642-629-00	s	SPRING, COMPRESSION
304	3-701-441-21	s	WASHER
305	3-701-443-21	s	WASHER, 5
306	3-701-506-01	s	SET SCREW, DOUBLE POINT 3X4
307	3-701-511-00	s	SET SCREW, DOUBLE POINT 4X6
308	3-703-358-54	o	PIN, PARALLEL (DIA. 2X10)
309	3-715-313-01	o	ARM (B), CRANK
310	3-715-316-01	o	SHAFT
311	3-715-316-11	o	SHAFT
312	3-715-329-01	o	SHAFT, CASSETTE HEIGHT
313	3-715-331-01	o	SLEEVE, LIMITER
314	3-715-339-01	s	SLEEVE
315	3-715-340-01	o	SPRING
316	3-715-341-01	o	CLAW, REEL TABLE
317	3-715-347-01	o	SHAFT (A), CRANK
318	3-715-348-02	s	WHEEL, W
319	3-715-348-12	s	WHEEL, W
320	3-715-350-01	o	PULLEY (S), TIMING
321	3-715-351-01	o	BEARING (B)
322	3-715-352-01	o	SHAFT, WORM
323	3-715-354-01	s	WORM
324	3-715-354-11	s	WORM
325	3-715-356-01	s	GEAR (A), FLAT
326	3-715-357-01	s	GEAR (B), FLAT
327	3-715-359-01	o	BELT, TIMING
328	3-715-614-04	o	FRAME (S), MOTOR
329	3-715-615-04	o	FRAME (T), MOTOR
330	3-715-358-52	o	PIN, PARALLEL (DIA. 2X6)
331	3-701-438-01	o	WASHR 2.5, t=0.13
401	4-879-763-00	s	SPRING, COMPRESSION
701	7-621-759-35	s	SCREW, +PSW, 2.6X5
702	7-621-772-30	s	SCREW, +B 2X6
703	7-623-208-22	s	SW 3, TYPE 2
704	7-624-102-04	s	STOP RING 1.5, TYPE-E
705	7-624-105-04	s	STOP RING 2.3, TYPE-E
706	7-624-106-04	s	STOP RING 3.0, TYPE-E
707	7-624-108-04	s	STOP RING 4.0, TYPE-E
708	7-624-197-11	s	STOP RING 14, TYPE-C
709	7-627-454-17	s	SCREW, +K 2.6X4
710	7-628-254-00	s	SCREW, +PS 2.6X5
711	7-682-647-09	s	SCREW, +PS 3X6
712	7-682-947-01	s	SCREW, +PSW 3X6
713	7-682-948-01	s	SCREW, +PSW 3X8
714	3-724-831-01	s	SET SCREW, FLAT POINT 3X4
715	7-683-402-04	s	SCREW, C 3X5
716	7-683-410-04	s	SCREW, C 3X20
718	7-685-132-29	s	SCREW, P 2.6X5
719	7-621-775-10	o	SCREW, +B 2.6X4
801	8-835-227-01	s	MOTOR, DC U-6A

REEL TABLE ASS' Y REEL TABLE ASS' Y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S SIDE GUIDES & PINCH ROLLER ASSEMBLY, DVR-1000

No.	part No.	SP	Description
A01	A−6029−045−B	s	GUIDE ASSY, S DRAWER
A02	A−6029−017−A	o	SENSOR ASSY, END
A03	A−6029−029−A	o	HOLDER ASSY, TENSION REGULATOR
A04	A−6029−043−B	s	PINCH ASSY
X01	X−3715−315−2	o	ARM ASSY
X02	X−3715−317−1	o	LINK ASSY, RETURN
X03	X−3715−318−1	o	LINK ASSY, ROTARY
X04	X−3715−319−1	o	LINK (S) ASSY, ROTARY
X05	X−3715−320−1	o	ARM ASSY, SS
X06	X−3715−323−1	s	ARM (B) ASSY, TENSION
X07	X−3715−324−1	s	SHAFT ASSY, TENSION REGULATOR
X08	X−3715−325−4	o	SLIDER ASSY, S DRAWER
X09	X−3715−326−1	o	GUIDE BLOCK ASSY, S
X10	X−3715−375−1	s	GUIDE (N) ASSY, ROLLER
X11	X−3715−377−1	o	GUIDE (SUB) ASSY, ROLLER
X12	X−3715−388−2	o	SUPPORT ASSY, PINCH
X13	X−3715−389−2	o	PINCH BLOCK ASSY
X14	X−3715−397−1	s	GUIDE BLOCK ASSY, S DRAWER
X15	X−3715−489−1	o	RETAINER ASSY, GUIDE, PS
X16	X−3715−376−1	s	GUIDE (W) ASSY, ROLLER
301	3−161−605−01	s	BEARING (FLANGE), BALL
302	3−305−526−00	s	SPRING, TENSION
303	3−458−053−01	s	SPRING, COMPRESSION
304	3−570−228−00	s	SPRING, COMPRESSION
305	3−575−488−00	s	SPRING, COMPRESSION
306	3−646−114−00	o	PIN, SPRING
307	3−651−607−00	s	BEARING, BALL
308	3−659−338−00	s	SPRING, COMPRESSION
309	3−672−461−00	s	SPRING, TENSION
310	3−673−761−01	o	PIECE, ADJUSTMENT
311	3−701−439−01	s	WASHER 3, t=0.13
	3−701−439−11	s	WASHER 3, t=0.25
312	3−701−441−01	s	WASHER
313	3−701−441−11	s	WASHER
314	3−701−441−21	s	WASHER
315	3−701−443−21	s	WASHER, 5
316	3−701−505−00	s	SET SCREW, DOUBLE POINT 3X4
317	3−715−410−01	o	LINK, ROAD
318	3−715−411−01	o	SPRING
319	3−715−422−01	s	WHEEL, LINK
320	3−715−423−01	o	NUT, LINK
321	3−715−426−01	s	WHEEL (S), LINK
322	3−715−447−01	o	RETAINER (A), BEARING
323	3−715−448−01	o	HOLDER, DME
324	3−715−449−01	o	RETAINER, BEARING
326	3−715−613−01	s	RAIL, SS
327	3−724−810−01	s	SPACER, D
328	3−715−812−01	s	FLANGE
329	3−715−813−01	s	RETAINER, FLANGE
330	3−715−814−01	s	HOLDER (2), COLOR
331	3−716−725−01	o	RETAINER BLOCK (SS)
332	3−716−775−02	s	FLANGE, (B)
333	3−716−776−02	o	STOPPR ROTATION
334	3−701−577−00	s	SCREW (M2X5), CAP
401	4−866−079−01	s	SPRING, COMPRESSION
701	7−621−759−45	s	SCREW, +PSW 2.6X6
702	7−621−772−10	s	SCREW, +B 2X4
703	7−621−775−10	s	SCREW, +B 2.6X4
704	7−624−102−04	s	STOP RING 1.5, TYPE−E
705	7−624−105−04	s	STOP RING 2.3, TYPE−E
706	7−624−106−04	s	STOP RING 3.0, TYPE−E
707	7−624−132−11	s	STOP RING 10, TYPE−C
708	7−626−305−61	o	SPRING PIN 1X4
709	7−627−553−68	s	SCREW, PRECISION +P 2X6
710	7−627−556−38	s	SCREW, +P 2.6X4.0
711	7−628−253−00	s	SCREW, +PS 2X4
712	7−628−254−30	s	SCREW, +PS 2.6X10
713	7−682−948−01	s	SCREW, +PSW 3X8
714	7−682−950−01	s	SCREW, +PSW 3X12
715	7−683−237−01	s	SET SCREW, FLAT POINT 3X3
716	7−683−404−04	s	SCREW, C 3X8
717	7−685−103−19	s	SCREW, +P 2X5 TYPE2 SLIT
718	7−688−002−01	s	W 2.6, SMALL
719	7−688−003−01	s	W 3, SMALL
720	7−623−924−11	s	WASHR 3, t=0.8
801	8−825−770−01	s	HEAD, FE

T SIDE GUIDES & CAPSTAN ASS' Y

T SIDE GUIDES & CAPSTAN ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A-6029-050-A	o	BASE ASSY, T GUIDE
A02	A-6029-012-D	o	CD BLOCK ASSY
A03	A-6029-013-B	o	PIN ASSY, STANDARD
A04	A-6029-017-A	o	SENSOR ASSY, END
X01	X-3715-309-1	o	PIN ASSY, LINK
X02	X-3715-310-1	o	BASE ASSY, T ROLLER
X03	X-3715-311-1	o	ARM ASSY, PRESS
X04	X-3715-375-1	s	GUIDE (N) ASSY, ROLLER
X05	X-3715-313-2	o	BASE ASSY, SLIDE
X06	X-3715-312-2	o	BASE ASSY, AU
101	1-454-434-11	s	SOLENOID, PLUNGER
201	2-266-943-00	s	SPRING, COMPRESSION
301	3-429-123-00	s	SPRING
302	3-498-078-01	o	SPRING, COMPRESSION
303	3-554-017-00	s	SPRING, COMPRESSION
304	3-673-907-00	o	SCREW (M3)
305	3-680-316-00	s	NUT (M4), STOPPER
306	3-701-439-01	s	WASHER 3, t=0.13
307	3-701-439-11	s	WASHER 3, t=0.25
308	3-701-439-21	s	WASHER 3, t=0.50
309	3-701-444-11	s	WASHER 6, t=0.25
310	3-701-444-21	s	WASHER 6, t=0.50
311	3-701-447-21	s	WASHER 10
312	3-701-506-01	s	SET SCREW, DOUBLE POINT 3X4
313	3-715-319-01	s	SPACER (K), t=10um
	3-715-319-11	s	SPACER (K), t=20um
314	3-715-374-02	o	LINK, SUB
315	3-715-375-01	o	SUPPORT, SUB LINK
316	3-715-376-01	o	STOPPER, ARM
317	3-715-377-01	o	STOPPER, AU
318	3-715-379-01	o	SHAFT, ARM, PRESS
319	3-715-380-01	o	SPACER, ROTARY
320	3-715-385-01	o	LIMITER, PRESS
321	3-715-386-01	o	LINK, LIMITTER
322	3-715-387-01	o	PIN, PRESS
323	3-715-388-01	o	PRESS BLOCK
324	3-715-389-01	o	PLATE, PRESS, PINCH
325	3-715-390-01	o	PLATE, ADJUSTMENT, ARM
326	3-715-391-01	o	SPRING
327	3-715-395-02	o	PLATE, POSITIONING
328	3-715-396-02	o	LINK, SOLENOID
329	3-715-398-01	o	PIN, SOLENOID
330	3-715-401-01	o	PIN, AU LOCK
331	3-715-402-01	o	FLANGE, FIXED
332	3-715-403-01	o	GUIDE, F FIXED
333	3-715-404-01	o	RETAINER, GUIDE
334	3-715-809-11	s	SPACER (R)
335	3-715-812-02	s	FLANGE
336	3-715-813-01	s	RETAINER, FLANGE
337	3-715-814-11	s	HOLDER (2), COLOR
401	4-866-079-01	s	SPRING, COMPRESSION
402	4-887-106-00	s	SPRING, COMPRESSION
701	7-623-208-22	s	SW 3, TYPE 2
702	7-624-105-04	s	STOP RING 2.3, TYPE-E
703	7-624-109-04	s	STOP RING 5.0, TYPE-E
704	7-627-553-38	s	SCREW, PRECISION +P 2X3
705	7-627-556-38	s	SCREW, +P 2.6X4.0
706	7-628-254-15	s	SCREW, PS 2.6X6
707	7-682-649-09	s	SCREW, +PS 3X10
708	7-682-664-09	s	SCREW, +PS 4X14
709	7-682-903-11	s	SCREW, +PWH 3X6
710	7-682-947-01	s	SCREW, +PSW 3X6
711	7-682-948-01	s	SCREW, +PSW 3X8
712	7-682-949-01	s	SCREW, +PSW 3X10
713	7-682-950-01	s	SCREW, +PSW 3X12
714	7-683-237-01	s	SET SCREW, FLAT POINT 3X3
715	7-683-404-04	s	SCREW, C 3X8
716	7-683-406-04	s	SCREW, C 3X12
717	7-683-408-04	s	SCERW, C 3X16
718	7-685-103-19	s	SCREW, +P 2X5, TYPE2 SLIT
719	7-688-001-01	s	W 2, SMALL
720	7-688-001-12	s	W 2, MIDDLE
721	7-688-002-01	s	W 2.6, SMALL
722	7-688-003-01	s	W 3, SMALL
723	7-688-004-01	s	W 4, SMALL
801	8-825-770-12	s	HEAD, AUDIO
802	8-835-234-01	s	MOTOR, DC BHF-1916A

SLANT GUIDE, THREADING MOTOR & DRIVING SHAFT ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A−6029−046−A	s	GUIDE ASSY, S SLANT
A02	A−6029−047−A	s	GUIDE ASSY, S ROLLER
A03	A−6029−048−B	s	GUIDE ASSY, T SLANT
A04	A−6029−042−C	o	GUIDE ASSY, T ROLLER
A05	A−6029−037−A	o	BOX ASSY, GEAR
X01	X−3715−321−1	o	BRACKET ASSY, GEAR
X02	X−3715−329−2	o	SLIDER ASSY, S SLANT GUIDE
X03	X−3715−330−1	o	SLIDER ASSY, T SLANT GUIDE
X04	X−3715−377−1	o	GUIDE SUB ASSY, ROLLE
101	1−237−578−11	s	POTENTIOMETER 5K
201	2−640−047−01	s	SCREW 2X5
301	3−481−272−00	s	SPRING, COMPRESSION
302	3−572−513−00	o	SPRING, COMPRESSION
303	3−659−338−00	s	SPRING, COMPRESSION
304	3−692−591−01	s	SCREW, +P 2X3, PRECISION
305	3−701−439−11	s	WASHER
306	3−701−443−21	s	WASHER 5
307	3−701−505−00	s	SET SCREW, DOUBLE POINT 3X3
308	3−701−579−01	o	SCREW M2X8, CAP
309	3−715−319−01	s	SPACER (K), t=10um
	3−715−319−11	s	SPACER (K), t=20um
	3−715−319−21	s	SPACER (K), t=30um
	3−715−319−31	s	SPACER (K), t=50um
310	3−715−325−01	s	RAIL, S
311	3−715−326−01	s	RAIL, T
312	3−715−430−01	o	SHAFT (C4), MAIN
313	3−715−431−01	o	SPACER
314	3−715−432−01	o	SLEEVE, SLIDE
315	3−715−433−01	o	PIN, WORM
316	3−715−434−01	s	GEAR (I)
317	3−715−435−01	s	GEAR (T), WORM
318	3−715−436−01	s	GEAR (S), WORM
319	3−715−437−01	o	SLEEVE, B
320	3−715−439−03	s	GEAR (H)
321	3−715−440−01	s	GEAR (G)
322	3−715−459−01	o	SLIDER
323	3−715−476−01	s	GEAR (C)
324	3−715−477−01	s	GEAR (D)
325	3−715−479−01	s	GEAR (A)
326	3−715−480−01	o	GEAR (B)
327	3−715−481−01	o	SLEEVE, GB
328	3−715−481−11	o	SLEEVE, GB
329	3−715−485−01	s	GEAR (E)

(SLANT GUIDE, THREADING MOTOR & DRIVING SHAFT ASSEMBLY ,DVR-1000)

No.	Part No.	SP	Description
330	3−715−488−01	o	SLEEVE, WORM GEAR
331	3−715−489−01	o	SHAFT, GB WORM
332	3−715−490−01	s	WORM (G)
333	3−715−491−01	o	JOINT, SHAFT
334	3−715−494−01	o	SCREW, LOADING
335	3−715−495−01	s	GUIDE, FIXED
336	3−715−628−01	o	HOLDER, S FIXED GUIDE
337	3−715−630−01	o	HOLDER, T FIXED GUIDE
338	3−715−803−01	s	FLANGE (2), ROLLER (LOWER)
339	3−715−812−01	s	FLANGE
340	3−715−813−01	s	RETAINER, FLANGE
341	3−715−814−01	s	HOLDER (2), COLOR
342	3−715−874−01	s	BEARING (FLANGE), BALL
343	3−576−336−00	s	SPRING, COMPRESSION
344	3−722−964−01	s	GUIDE, SLIDER
345	3−735−144−01	o	COVER, GEAR BOX
401	4−858−559−00	s	WASHER
402	4−866−079−01	s	SPRING, COMPRESSION
701	7−621−772−10	s	SCREW, +B 2X4
702	7−624−105−04	s	STOP RING 2.3, TYPE−E
703	7−624−108−04	s	STOP RING 4.0, TYPE−E
704	7−682−646−09	s	SCREW, +PS 3X5
705	7−682−948−01	s	SCREW, +PSW 3X8
706	7−682−950−01	s	SCREW, +PSW 3X12
707	7−683−237−01	s	SET SCREW, FLAT POINT 3X3
708	7−688−001−01	s	W 2, SMALL
801	8−835−123−01	s	MOTOR, DC (MNR−7400A)

HEAD DRUM ASS' Y

HEAD DRUM ASSEMBLY, DVR-1000

No.	Part No.	SP	Description
A01	A-6050-470-B	s	HEAD DRUM ASSY, DDH-01A-R
A02	A-6050-465-A	s	BUSHING ASSY, SHAFT GROUND
A03	A-6050-471-B	s	SCANER ASSY
X01	X-3715-327-1	o	BRACKET ASSY, DRUM
X02	X-3715-371-1	o	TABLE ASSY, SLANT
201	2-623-773-21	o	BOLT (M3X10), STAINLESS
301	3-306-861-00	s	SPRING, TENSION
302	3-715-465-01	o	GUIDE, GEAR
303	3-715-468-01	s	GEAR (F)
304	3-715-470-01	s	SPACER (ST), t=100um
	3-715-470-11	s	SPACER (ST), t=50um
	3-715-470-21	s	SPACER (ST), t=20um
	3-715-470-31	s	SPACER (ST), t=10um
305	3-715-471-01	o	GEAR, LOADING
306	3-715-472-01	o	LINK (S), BANANA
307	3-715-473-01	o	HOOK, SPRING
308	3-715-474-01	o	PIN (M), ARM
309	3-715-475-01	o	LINK (T), BANANA
310	3-715-677-01	o	RAIL BLOCK (S)
311	3-715-678-01	o	RAIL BLOCK (T)
312	3-716-722-01	o	SPACER, RAIL BLOCK, t=10um
	3-716-722-11	o	SPACER, RAIL BLOCK, t=20um
	3-716-722-21	o	SPACER, RAIL BLOCK, t=30um
313	3-716-723-01	o	RETAINER BLOCK (S)
314	3-716-724-01	o	RETAINER BLOCK (T)
701	7-621-770-67	s	SCREW, +B 2.6X6
702	7-621-772-10	s	SCREW, +B 2X4
703	7-621-775-10	s	SCREW, +B 2.6X4
704	7-623-208-22	s	SW 3, TYPE 2
705	7-623-210-22	s	SW 4, TYPE 2
706	7-624-106-04	s	STOP RING 3.0, TYPE-E
707	7-628-254-10	s	SCREW, +PS 2.6X6
708	7-682-548-09	s	SCREW, +B 3X8
709	7-682-948-01	s	SCREW, +PSW 3X8
710	7-683-406-04	s	SCREW, C 3X12
711	7-683-421-04	s	SCREW, C 4X12
712	7-688-002-02	s	W 2.6, SMALL
713	7-688-003-01	s	W 3, SMALL
714	7-688-003-11	s	W 3, MIDDLE
715	7-688-004-01	s	W 4, SMALL

NONPOLAR CAPACITOR

Replacements for nonpolar capacitors not given in board parts lists are shown in the following list. If a capacitor with the desired working voltage is not found, choose one of a higher work

Part No.	SP	Description	
1-107-019-00	s	CAP, MICA	1.0 pF±0.5 pF 500 V
1-107-039-00	s	CAP, MICA	1.2 pF±0.5 pF 500 V
1-107-040-00	s	CAP, MICA	1.5 pF±0.5 pF 500 V
1-107-041-00	s	CAP, MICA	1.8 pF±0.5 pF 500 V
1-107-042-00	s	CAP, MICA	2.2 pF±0.5 pF 500 V
1-107-043-00	s	CAP, MICA	2.7 pF±0.5 pF 500 V
1-107-044-00	s	CAP, MICA	3.3 pF±0.5 pF 500 V
1-107-045-00	s	CAP, MICA	3.9 pF±0.5 pF 500 V
1-107-046-00	s	CAP, MICA	4.7 pF±0.5 pF 500 V
1-107-026-00	s	CAP, MICA	5.1 pF±0.5 pF 500 V
1-107-047-00	s	CAP, MICA	5.6 pF±0.5 pF 500 V
1-107-048-00	s	CAP, MICA	6.8 pF±0.5 pF 500 V
1-107-049-00	s	CAP, MICA	8.2 pF±0.5 pF 500 V
1-107-202-00	s	CAP, MICA	10 pF 5% 500 V
1-107-203-00	s	CAP, MICA	11 pF 5% 500 V
1-107-204-00	s	CAP, MICA	12 pF 5% 500 V
1-107-205-00	s	CAP, MICA	13 pF 5% 500 V
1-107-206-00	s	CAP, MICA	15 pF 5% 500 V
1-107-207-00	s	CAP, MICA	16 pF 5% 500 V
1-107-208-00	s	CAP, MICA	18 pF 5% 500 V
1-107-209-00	s	CAP, MICA	20 pF 5% 500 V
1-107-210-00	s	CAP, MICA	22 pF 5% 500 V
1-107-211-00	s	CAP, MICA	24 pF 5% 500 V
1-107-157-00	s	CAP, MICA	27 pF 5% 500 V
1-107-158-00	s	CAP, MICA	30 pF 5% 500 V
1-107-159-00	s	CAP, MICA	33 pF 5% 500 V
1-107-074-00	s	CAP, MICA	36 pF 5% 50 V
1-107-075-00	s	CAP, MICA	39 pF 5% 50 V
1-107-076-00	s	CAP, MICA	43 pF 5% 50 V
1-107-077-00	s	CAP, MICA	47 pF 5% 50 V
1-107-164-00	s	CAP, MICA	51 pF 5% 500 V
1-107-165-00	s	CAP, MICA	56 pF 5% 500 V
1-107-166-00	s	CAP, MICA	62 pF 5% 500 V
1-107-036-00	s	CAP, MICA	68 pF 5% 500 V
1-107-167-00	s	CAP, MICA	75 pF 5% 500 V
1-107-083-00	s	CAP, MICA	82 pF 5% 50 V
1-107-084-00	s	CAP, MICA	91 pF 5% 50 V
1-107-085-00	s	CAP, MICA	100 pF 5% 50 V
1-107-086-00	s	CAP, MICA	110 pF 5% 50 V
1-107-087-00	s	CAP, MICA	120 pF 5% 50 V
1-109-538-00	s	CAP, MICA	130 pF 5% 100 V
1-109-539-00	s	CAP, MICA	150 pF 5% 100 V
1-107-090-00	s	CAP, MICA	160 pF 5% 50 V
1-109-540-00	s	CAP, MICA	180 pF 5% 100 V
1-109-541-00	s	CAP, MICA	200 pF 5% 100 V
1-109-542-00	s	CAP, MICA	220 pF 5% 100 V
1-109-545-00	s	CAP, MICA	270 pF 5% 100 V
1-109-547-00	s	CAP, MICA	330 pF 5% 100 V
1-109-549-00	s	CAP, MICA	390 pF 5% 100 V
1-109-633-00	s	CAP, MICA	470 pF 2% 500 V
1-109-555-00	s	CAP, MICA	560 pF 5% 100 V
1-109-635-00	s	CAP, MICA	680 pF 2% 500 V
1-162-765-11	s	CAP, CERAMIC	0.001 5% 50 V
1-162-769-11	s	CAP, CERAMIC	0.0022 5% 50 V
1-162-777-11	s	CAP, CERAMIC	0.01 5% 50 V
1-162-781-11	s	CAP, CERAMIC	0.022 5% 50 V
1-162-806-11	s	CAP, CERAMIC	0.1 10% 50 V
1-162-810-11	s	CAP, CERAMIC	0.22 10% 50 V
1-162-812-11	s	CAP, CERAMIC	0.33 10% 50 V

ELECTROLYTIC CAPACITOR

Replacements for electrolytic capacitors not given in board parts lists are shown in the following list. If a capacitor with the desired working voltage is not found , choose one of a higher working voltage.

Part No.	SP	Description	
1-124-902-00	s	CAP, ELECT	0.47 20% 50 V
1-124-791-11	s	CAP, ELECT	1.0 20% 100 V
1-124-925-11	s	CAP, ELECT	2.2 20% 100 V
1-123-382-00	s	CAP, ELECT	3.3 20% 100 V
1-124-927-00	s	CAP, ELECT	4.7 20% 100 V
1-123-875-91	s	CAP, ELECT	10 20% 50 V
1-124-908-11	s	CAP, ELECT	22 20% 50 V
1-124-963-11	s	CAP, ELECT	33 20% 16 V
1-124-482-11	s	CAP, ELECT	33 20% 35 V
1-124-917-11	s	CAP, ELECT	33 20% 63 V
1-124-446-11	s	CAP, ELECT	47 20% 10 V
1-124-477-11	s	CAP, ELECT	47 20% 25 V
1-124-910-11	s	CAP, ELECT	47 20% 50 V
1-124-443-00	s	CAP, ELECT	100 20% 10 V
1-126-101-11	s	CAP, ELECT	100 20% 16 V
1-124-478-11	s	CAP, ELECT	100 20% 25 V
1-124-122-11	s	CAP, ELECT	100 20% 50 V
1-124-444-00	s	CAP, ELECT	220 20% 10 V
1-124-120-11	s	CAP, ELECT	220 20% 25 V
1-124-484-11	s	CAP, ELECT	220 20% 35 V
1-124-911-11	s	CAP, ELECT	220 20% 50 V
1-124-442-00	s	CAP, ELECT	330 20% 6.3 V
1-124-604-00	s	CAP, ELECT	330 20% 10 V
1-124-119-00	s	CAP, ELECT	330 20% 16 V
1-124-479-11	s	CAP, ELECT	330 20% 25 V
1-124-485-11	s	CAP, ELECT	330 20% 35 V
1-124-912-11	s	CAP, ELECT	330 20% 50 V
1-124-472-11	s	CAP, ELECT	470 20% 10 V
1-124-475-11	s	CAP, ELECT	470 20% 16 V
1-124-480-11	s	CAP, ELECT	470 20% 25 V
1-126-104-11	s	CAP, ELECT	470 20% 35 V
1-124-913-11	s	CAP, ELECT	470 20% 50 V

RESISTOR

Replacements for resistors not given in board parts lists are shown in the following list.

Part No.	SP	Description	
1-215-373-31	s	RES, METAL	10 1% 1/6 W
1-215-374-00	s	RES, METAL	11 1% 1/6 W
1-215-375-00	s	RES, METAL	12 1% 1/6 W
1-215-376-00	s	RES, METAL	13 1% 1/6 W
1-215-377-00	s	RES, METAL	15 1% 1/6 W
1-215-378-00	s	RES, METAL	16 1% 1/6 W
1-215-379-00	s	RES, METAL	18 1% 1/6 W
1-215-380-00	s	RES, METAL	20 1% 1/6 W
1-215-381-00	s	RES, METAL	22 1% 1/6 W
1-215-382-00	s	RES, METAL	24 1% 1/6 W
1-215-383-00	s	RES, METAL	27 1% 1/6 W
1-215-384-00	s	RES, METAL	30 1% 1/6 W
1-215-385-00	s	RES, METAL	33 1% 1/6 W
1-215-386-00	s	RES, METAL	36 1% 1/6 W
1-215-387-00	s	RES, METAL	39 1% 1/6 W
1-215-388-00	s	RES, METAL	43 1% 1/6 W
1-215-389-00	s	RES, METAL	47 1% 1/6 W
1-215-390-00	s	RES, METAL	51 1% 1/6 W
1-215-391-00	s	RES, METAL	56 1% 1/6 W
1-215-392-00	s	RES, METAL	62 1% 1/6 W
1-215-393-00	s	RES, METAL	68 1% 1/6 W
1-215-394-00	s	RES, METAL	75 1% 1/6 W
1-215-395-00	s	RES, METAL	82 1% 1/6 W
1-215-396-00	s	RES, METAL	91 1% 1/6 W
1-215-397-00	s	RES, METAL	100 1% 1/6 W
1-215-398-00	s	RES, METAL	110 1% 1/6 W
1-215-399-00	s	RES, METAL	120 1% 1/6 W
1-215-400-00	s	RES, METAL	130 1% 1/6 W
1-215-401-00	s	RES, METAL	150 1% 1/6 W
1-215-402-00	s	RES, METAL	160 1% 1/6 W
1-215-403-00	s	RES, METAL	180 1% 1/6 W
1-215-404-00	s	RES, METAL	200 1% 1/6 W
1-215-405-00	s	RES, METAL	220 1% 1/6 W
1-215-406-00	s	RES, METAL	240 1% 1/6 W
1-215-407-00	s	RES, METAL	270 1% 1/6 W
1-215-408-00	s	RES, METAL	300 1% 1/6 W
1-215-409-00	s	RES, METAL	330 1% 1/6 W
1-215-410-00	s	RES, METAL	360 1% 1/6 W
1-215-411-00	s	RES, METAL	390 1% 1/6 W
1-215-412-00	s	RES, METAL	430 1% 1/6 W
1-215-413-00	s	RES, METAL	470 1% 1/6 W
1-215-414-00	s	RES, METAL	510 1% 1/6 W
1-215-415-00	s	RES, METAL	560 1% 1/6 W
1-215-416-00	s	RES, METAL	620 1% 1/6 W
1-215-417-00	s	RES, METAL	680 1% 1/6 W
1-215-418-00	s	RES, METAL	750 1% 1/6 W
1-215-419-00	s	RES, METAL	820 1% 1/6 W
1-215-420-00	s	RES, METAL	910 1% 1/6 W
1-215-421-00	s	RES, METAL	1.0k 1% 1/6 W
1-215-422-00	s	RES, METAL	1.1k 1% 1/6 W
1-215-423-00	s	RES, METAL	1.2k 1% 1/6 W
1-215-424-00	s	RES, METAL	1.3k 1% 1/6 W
1-215-425-00	s	RES, METAL	1.5k 1% 1/6 W
1-215-426-00	s	RES, METAL	1.6k 1% 1/6 W
1-215-427-00	s	RES, METAL	1.8k 1% 1/6 W
1-215-428-00	s	RES, METAL	2.0k 1% 1/6 W
1-215-429-00	s	RES, METAL	2.2k 1% 1/6 W
1-215-430-00	s	RES, METAL	2.4k 1% 1/6 W
1-215-431-00	s	RES, METAL	2.7k 1% 1/6 W
1-215-432-00	s	RES, METAL	3.0k 1% 1/6 W
1-215-433-00	s	RES, METAL	3.3 k 1% 1/6 W
1-215-434-00	s	RES, METAL	3.6 k 1% 1/6 W
1-215-435-00	s	RES, METAL	3.9 k 1% 1/6 W
1-215-436-00	s	RES, METAL	4.3 k 1% 1/6 W
1-215-437-00	s	RES, METAL	4.7 k 1% 1/6 W

(RESISTOR)

Replacements for resistors not given in board parts lists are shown in the following list.

Part No.	SP	Description	
1-215-438-00	s	RES, METAL	5.1 k 1% 1/6 W
1-215-439-00	s	RES, METAL	5.6 k 1% 1/6 W
1-215-440-00	s	RES, METAL	6.2 k 1% 1/6 W
1-215-441-00	s	RES, METAL	6.8 k 1% 1/6 W
1-215-442-00	s	RES, METAL	7.5 k 1% 1/6 W
1-215-443-00	s	RES, METAL	8.2 k 1% 1/6 W
1-215-444-00	s	RES, METAL	9.1 k 1% 1/6 W
1-215-445-00	s	RES, METAL	10 k 1% 1/6 W
1-215-446-00	s	RES, METAL	11 k 1% 1/6 W
1-215-447-00	s	RES, METAL	12 k 1% 1/6 W
1-215-448-00	s	RES, METAL	13 k 1% 1/6 W
1-215-449-00	s	RES, METAL	15 k 1% 1/6 W
1-215-450-00	s	RES, METAL	16 k 1% 1/6 W
1-215-451-00	s	RES, METAL	18 k 1% 1/6 W
1-215-452-00	s	RES, METAL	20 k 1% 1/6 W
1-215-453-00	s	RES, METAL	22 k 1% 1/6 W
1-215-454-00	s	RES, METAL	24 k 1% 1/6 W
1-215-455-00	s	RES, METAL	27 k 1% 1/6 W
1-215-456-00	s	RES, METAL	30 k 1% 1/6 W
1-215-457-00	s	RES, METAL	33 k 1% 1/6 W
1-215-458-00	s	RES, METAL	36 k 1% 1/6 W
1-215-459-00	s	RES, METAL	39 k 1% 1/6 W
1-215-460-00	s	RES, METAL	43 k 1% 1/6 W
1-215-461-00	s	RES, METAL	47 k 1% 1/6 W
1-215-462-00	s	RES, METAL	51 k 1% 1/6 W
1-215-463-00	s	RES, METAL	56 k 1% 1/6 W
1-215-464-00	s	RES, METAL	62 k 1% 1/6 W
1-215-465-00	s	RES, METAL	68 k 1% 1/6 W
1-215-466-00	s	RES, METAL	75 k 1% 1/6 W
1-215-467-00	s	RES, METAL	82 k 1% 1/6 W
1-215-468-00	s	RES, METAL	91 k 1% 1/6 W
1-215-469-00	s	RES, METAL	100 k 1% 1/6 W
1-215-470-00	s	RES, METAL	110 k 1% 1/6 W
1-215-471-00	s	RES, METAL	120 k 1% 1/6 W
1-215-472-00	s	RES, METAL	130 k 1% 1/6 W
1-215-473-00	s	RES, METAL	150 k 1% 1/6 W
1-215-474-00	s	RES, METAL	160 k 1% 1/6 W
1-215-475-00	s	RES, METAL	180 k 1% 1/6 W
1-215-476-00	s	RES, METAL	200 k 1% 1/6 W
1-215-477-00	s	RES, METAL	220 k 1% 1/6 W
1-215-478-00	s	RES, METAL	240 k 1% 1/6 W
1-215-479-00	s	RES, METAL	270 k 1% 1/6 W
1-215-480-00	s	RES, METAL	300 k 1% 1/6 W
1-215-481-00	s	RES, METAL	330 k 1% 1/6 W
1-215-482-00	s	RES, METAL	360 k 1% 1/6 W
1-215-483-00	s	RES, METAL	390 k 1% 1/6 W
1-215-484-00	s	RES, METAL	430 k 1% 1/6 W
1-215-485-00	s	RES, METAL	470 k 1% 1/6 W
1-215-486-00	s	RES, METAL	510 k 1% 1/6 W
1-215-487-00	s	RES, METAL	560 k 1% 1/6 W
1-215-488-00	s	RES, METAL	620 k 1% 1/6 W
1-215-489-00	s	RES, METAL	680 k 1% 1/6 W
1-215-490-00	s	RES, METAL	750 k 1% 1/6 W
1-215-491-00	s	RES, METAL	820 k 1% 1/6 W
1-215-492-00	s	RES, METAL	910 k 1% 1/6 W
1-215-493-00	s	RES, METAL	1.0M 1% 1/6 W

AE-05 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6013-084-A	o	AE-05 COMPLETE PCB, AE-05
(This assembly includes the following parts.)			
2pcs	3-673-249-11	o	LEVER, PC BOARD
2pcs	7-626-320-11	o	PIN, SPRING 3X8
3pcs	4-352-844-01	s	PIN, LEAD, COATING
6pcs	7-622-207-05	s	N 2.6, TYPE 2
6pcs	7-628-254-30	s	SCREW, +PS 2.6X10
1pc	3-715-590-11	o	LABEL, SERIAL NUMBER
4pcs	7-682-647-09	s	SCREW +PS 3X6
C102	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C103	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C104	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C105	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C106	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C107	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C108	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C109	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C111	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C112	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C113	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C114	1-130-469-00	s	CAP, MYLAR 680PF 5% 50V
C115	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C116	1-130-472-00	s	CAP, MYLAR 0.0012uF 5% 50V
C117	1-130-482-00	s	CAP, MYLAR 0.0082uF 5% 50V
C119	1-130-494-11	s	CAP, MYLAR 0.082uF 5% 50V
C120	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C121	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C122	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C123	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C124	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C125	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C126	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C127	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C128	1-130-467-00	s	CAP, MYLAR 470PF 5% 50V
C129	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C130	1-109-561-00	s	CAP, MICA 0.001uF 5% 100V
C132	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C134	1-131-395-00	s	CAP, TANT 100uF 10% 3.15
C135	1-130-477-00	s	CAP, MYLAR 0.0033uF 5% 50V
C136	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C137	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C138	1-130-479-00	s	CAP, MYLAR 0.0047uF 5% 50V
C139	1-130-480-00	s	CAP, MYLAR 0.0056uF 5% 50V
C140	1-130-480-00	s	CAP, MYLAR 0.0056uF 5% 50V
C141	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C142	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C143	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C144	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C145	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C146	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C147	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C149	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C150	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C151	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C152	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C153	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C154	1-131-381-00	s	CAP, TANT 47uF 10% 10V
C155	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C156	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C157	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C158	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C159	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C160	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C161	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C162	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C163	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C164	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C165	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C201	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C202	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C204	1-124-247-00	s	CAP, ELECT 10uF 20% 25V

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Ref. No. or Qty	Part No.	SP	Description
C205	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C206	1-131-363-00	s	CAP, TANT 4.7uF 10% 16V
C207	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C208	1-131-367-00	s	CAP, TANT 22uF 10% 20V
C209	1-130-494-11	s	CAP, MYLAR 0.082uF 5% 50V
C210	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C211	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C212	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C213	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C214	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C215	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C216	1-130-467-00	s	CAP, MYLAR 470PF 5% 50V
C217	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C218	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C219	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C220	1-109-561-00	s	CAP, MICA 0.001uF 5% 100V
C222	1-130-491-00	s	CAP, MYLAR 0.047uF 5% 50V
C223	1-130-478-00	s	CAP, MYLAR 0.0039uF 5% 50V
C224	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C225	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C226	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C227	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C228	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C229	1-131-395-00	s	CAP, TANT 100uF 10% 3.15
C230	1-130-474-00	s	CAP, MYLAR 0.0018uF 5% 50V
C231	1-130-479-00	s	CAP, MYLAR 0.0047uF 5% 50V
C232	1-130-467-00	s	CAP, MYLAR 470PF 5% 50V
C233	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C234	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C235	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C236	1-124-234-00	s	CAP, ELECT 22uF 20% 16V
C237	1-130-473-00	s	CAP, MYLAR 0.0015uF 5% 50V
C238	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C239	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C240	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C241	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C242	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C243	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C244	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C301	1-109-536-00	s	CAP, MICA 110PF 5% 100V
C302	1-131-367-00	s	CAP, TANT 22uF 10% 20V
C306	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C307	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C310	1-130-467-00	s	CAP, MYLAR 470PF 5% 50V
C311	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C312	1-109-561-00	s	CAP, MICA 0.001uF 5% 100V
C314	1-131-395-00	s	CAP, TANT 100uF 10% 3.15
C315	1-130-480-00	s	CAP, MYLAR 0.0056uF 5% 50V
C316	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C317	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C318	1-130-479-00	s	CAP, MYLAR 0.0047uF 5% 50V
C320	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C321	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C322	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C323	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C324	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C407	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C408	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C509	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C510	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C511	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C512	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C514	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C515	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C516	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C517	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C518	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C519	1-109-561-00	s	CAP, MICA 0.001uF 5% 100V
C520	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C521	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Qty	Part No.	SP	Description
C522	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C523	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C525	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C526	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C527	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C528	1-109-561-00	s	CAP, MICA 0.001uF 5% 100V
C529	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C530	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C531	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C533	1-130-468-00	s	CAP, MYLAR 560PF 5% 50V
C536	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C537	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C538	1-109-637-00	s	CAP, MICA 0.001uF 5% 500V
C539	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C540	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C541	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C601	1-130-473-00	s	CAP, MYLAR 0.0015uF 5% 50V
C602	1-131-393-00	s	CAP, TANT 47uF 10% 3.15
C604	1-130-480-00	s	CAP, MYLAR 0.0056uF 5% 50V
C605	1-131-347-00	s	CAP, TANT 1uF 20% 35V
C608	1-130-473-00	s	CAP, MYLAR 0.0015uF 5% 50V
C610	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C613	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C614	1-124-247-00	s	CAP, ELECT 10uF 20% 25V
C615	1-124-234-00	s	CAP, ELECT 22uF 20% 16V
C616	1-124-234-00	s	CAP, ELECT 22uF 20% 16V
C617	1-124-638-11	s	CAP, ELECT 22uF 20% 6.3V
C618	1-124-638-11	s	CAP, ELECT 22uF 20% 6.3V
C625	1-102-110-00	s	CAP, CERAMIC 220PF 10% 50V
CN713	1-506-748-11	s	RECEP, DIN 96P, MALE
CN714	1-506-746-11	s	RECEP, DIN 48P, MALE
CN715	1-506-746-11	s	RECEP, DIN 48P, MALE
D103	8-719-912-20	s	DIODE 1SS120
D104	8-719-912-20	s	DIODE 1SS120
D105	8-719-912-20	s	DIODE 1SS120
D106	8-719-912-20	s	DIODE 1SS120
D107	8-719-912-20	s	DIODE 1SS120
D108	8-719-100-30	s	DIODE RD5.1E-B2
D109	8-719-912-20	s	DIODE 1SS120
D201	8-719-912-20	s	DIODE 1SS120
D202	8-719-912-20	s	DIODE 1SS120
D203	8-719-912-20	s	DIODE 1SS120
D401	8-719-912-20	s	DIODE 1SS120
D402	8-719-400-35	s	DIODE LN35BP
D403	8-719-400-35	s	DIODE LN35BP
D501	8-719-912-20	s	DIODE 1SS120
D502	8-719-912-20	s	DIODE 1SS120
D503	8-719-912-20	s	DIODE 1SS120
D504	8-719-912-20	s	DIODE 1SS120
D505	8-719-912-20	s	DIODE 1SS120
D506	8-719-912-20	s	DIODE 1SS120
D507	8-719-912-20	s	DIODE 1SS120
D508	8-719-912-20	s	DIODE 1SS120
D509	8-719-912-20	s	DIODE 1SS120
D510	8-719-912-20	s	DIODE 1SS120
D511	8-719-912-20	s	DIODE 1SS120
D512	8-719-912-20	s	DIODE 1SS120
D513	8-719-912-20	s	DIODE 1SS120
IC101	8-759-701-21	s	IC NJM5532D-D
IC102	8-759-603-82	s	IC M5241L
IC103	8-759-040-53	s	IC MC14053BCP
IC104	8-759-040-53	s	IC MC14053BCP
IC105	8-759-745-59	s	IC NJM4559D
IC106	8-759-602-83	s	IC M5238P
IC107	8-759-602-83	s	IC M5238P
IC108	8-759-700-04	s	IC NJM2043D-D
IC109	8-759-602-83	s	IC M5238P
IC110	8-759-040-53	s	IC MC14053BCP
IC111	8-759-602-83	s	IC M5238P
IC112	8-759-602-83	s	IC M5238P

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Ref. No. or Qty	Part No.	SP	Description
IC113	8-759-040-53	s	IC MC14053BCP
IC114	8-759-101-73	s	IC UPC1513HA
IC115	8-759-103-19	s	IC UPC319C
IC201	8-759-700-04	s	IC NJM2043D-D
IC202	8-759-103-19	s	IC UPC319C
IC203	8-759-040-53	s	IC MC14053BCP
IC204	8-759-040-53	s	IC MC14053BCP
IC205	8-759-602-83	s	IC M5238P
IC206	8-759-602-83	s	IC M5238P
IC207	8-759-745-59	s	IC NJM4559D
IC208	8-759-101-73	s	IC UPC1513HA
IC209	8-759-602-83	s	IC M5238P
IC210	8-759-745-59	s	IC NJM4559D
IC211	8-759-040-53	s	IC MC14053BCP
IC301	8-759-602-83	s	IC M5238P
IC302	8-759-602-83	s	IC M5238P
IC303	8-759-040-53	s	IC MC14053BCP
IC304	8-759-101-73	s	IC UPC1513HA
IC305	8-759-602-83	s	IC M5238P
IC306	8-759-103-19	s	IC UPC319C
IC401	8-759-925-26	s	IC CX23026
IC402	8-759-925-26	s	IC CX23026
IC403	8-759-925-26	s	IC CX23026
IC404	1-567-794-11	s	CRYSTAL 14.31818000MHz
IC405	8-759-103-19	s	IC UPC319C
IC406	8-759-916-29	s	IC SN74HC74N
IC407	8-759-916-29	s	IC SN74HC74N
IC408	8-759-916-29	s	IC SN74HC74N
IC409	8-759-925-26	s	IC CX23026
IC410	8-759-925-26	s	IC CX23026
IC411	8-759-921-08	s	IC SN74HC02N
IC412	8-759-974-06	s	IC SN7406N
IC413	8-759-250-20	s	IC TC5020BP
IC414	8-759-202-21	s	IC TC74HC32P
IC415	8-759-202-21	s	IC TC74HC32P
IC416	8-759-202-74	s	IC TC74HC04P
IC417	8-759-202-74	s	IC TC74HC04P
IC418	8-759-803-70	s	IC LC74HC08
IC419	8-759-708-09	s	IC NJM78L09A
IC420	8-759-700-68	s	IC NJM79L09A
IC501	8-759-602-83	s	IC M5238P
IC502	8-759-602-83	s	IC M5238P
IC503	8-759-602-83	s	IC M5238P
IC504	8-759-900-59	s	IC HI1-0201-5
IC601	8-759-906-07	s	IC TL607CP
IC602	8-759-708-05	s	IC NJM78L05A
IC603	8-759-700-65	s	IC NJM79L05A
L101	1-410-450-11	s	INDUCTOR, 3.9mH 10%
L102	1-410-439-11	s	INDUCTOR, 470uH
L201	1-410-450-11	s	INDUCTOR, 3.9mH 10%
L202	1-410-439-11	s	INDUCTOR, 470uH
L301	1-410-450-11	s	INDUCTOR, 3.9mH 10%
L302	1-410-439-11	s	INDUCTOR, 470uH
L501	1-421-329-00	s	COIL, CHOKE
L502	1-421-329-00	s	COIL, CHOKE
L503	1-421-329-00	s	COIL, CHOKE
L504	1-421-329-00	s	COIL, CHOKE
L505	1-410-450-11	s	INDUCTOR, 3.9mH 10%
L506	1-410-450-11	s	INDUCTOR, 3.9mH 10%
L507	1-410-450-11	s	INDUCTOR, 3.9mH 10%
LV101	1-407-286-00	s	INDUCTOR, VAR 2.2mH
LV201	1-407-286-00	s	INDUCTOR, VAR 2.2mH
LV301	1-407-286-00	s	INDUCTOR, VAR 2.2mH
LV501	1-407-285-00	s	INDUCTOR, VAR 1.5mH
LV502	1-407-284-00	s	INDUCTOR, VAR 1mH
LV503	1-407-282-00	s	INDUCTOR, VAR 0.47mH
Q201	8-729-900-36	s	TRANSISTOR DTC124ES
Q301	8-729-900-36	s	TRANSISTOR DTC124ES
Q501	8-729-169-02	s	TRANSISTOR 2SC2690A
Q502	8-729-122-02	s	TRANSISTOR 2SA1220A

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Qty	Part No.	SP	Description
Q503	8-729-169-02	s	TRANSISTOR 2SC2690A
Q504	8-729-122-02	s	TRANSISTOR 2SA1220A
Q505	8-729-600-60	s	TRANSISTOR 2SA1115P
Q506	8-729-245-82	s	TRANSISTOR 2SC2458-Y
Q507	8-729-265-52	s	TRANSISTOR 2SC2655-O
Q508	8-729-374-02	s	TRANSISTOR 2SB740
R105	1-215-830-11	s	RES, METAL 100K 1% 1/8W
R109	1-214-569-00	s	RES, METAL 3.3K 1% 1/8W
R110	1-214-569-00	s	RES, METAL 3.3K 1% 1/8W
R111	1-214-553-00	s	RES, METAL 680 1% 1/8W
R113	1-214-553-00	s	RES, METAL 680 1% 1/8W
R114	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R115	1-214-546-00	s	RES, METAL 360 1% 1/8W
R116	1-214-545-00	s	RES, METAL 330 1% 1/8W
R117	1-214-555-00	s	RES, METAL 820 1% 1/8W
R118	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R119	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R122	1-214-574-00	s	RES, METAL 5.1K 1% 1/8W
R123	1-214-574-00	s	RES, METAL 5.1K 1% 1/8W
R126	1-214-579-00	s	RES, METAL 8.2K 1% 1/8W
R127	1-247-881-00	s	RES, CARBON 120K 5% 1/4W
R128	1-247-883-00	s	RES, CARBON 150K 5% 1/4W
R129	1-214-580-00	s	RES, METAL 9.1K 1% 1/8W
R130	1-214-590-00	s	RES, METAL 24K 1% 1/8W
R131	1-214-550-00	s	RES, METAL 510 1% 1/8W
R132	1-215-824-11	s	RES, METAL 56K 1% 1/8W
R133	1-215-827-11	s	RES, METAL 75K 1% 1/8W
R134	1-214-533-00	s	RES, METAL 100 1% 1/8W
R135	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R136	1-247-887-00	s	RES, CARBON 220K 5% 1/4W
R137	1-214-554-00	s	RES, METAL 750 1% 1/8W
R138	1-214-545-00	s	RES, METAL 330 1% 1/8W
R140	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R142	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R143	1-214-509-00	s	RES, METAL 10 1% 1/8W
R144	1-214-509-00	s	RES, METAL 10 1% 1/8W
R145	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R148	1-214-591-00	s	RES, METAL 27K 1% 1/8W
R149	1-214-529-00	s	RES, METAL 68 1% 1/8W
R150	1-214-545-00	s	RES, METAL 330 1% 1/8W
R152	1-214-533-00	s	RES, METAL 100 1% 1/8W
R153	1-214-533-00	s	RES, METAL 100 1% 1/8W
R154	1-214-553-00	s	RES, METAL 680 1% 1/8W
R155	1-247-895-00	s	RES, CARBON 470K 5% 1/4W
R156	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R157	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R159	1-214-546-00	s	RES, METAL 360 1% 1/8W
R160	1-214-545-00	s	RES, METAL 330 1% 1/8W
R161	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R162	1-214-555-00	s	RES, METAL 820 1% 1/8W
R163	1-214-533-00	s	RES, METAL 100 1% 1/8W
R164	1-249-413-11	s	RES, CARBON 470 5% 1/4W
R166	1-214-589-00	s	RES, METAL 22K 1% 1/8W
R167	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R169	1-214-574-00	s	RES, METAL 5.1K 1% 1/8W
R170	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R171	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R172	1-215-822-11	s	RES, METAL 47K 1% 1/8W
R173	1-215-830-11	s	RES, METAL 100K 1% 1/8W
R174	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R175	1-214-565-00	s	RES, METAL 2.2K 1% 1/8W
R176	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R177	1-214-572-00	s	RES, METAL 4.3K 1% 1/8W
R178	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R179	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R180	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R181	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R182	1-214-557-00	s	RES, METAL 1K 1% 1/8W

(AE-05 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R183	1-215-827-11	s	RES, METAL 75K 1% 1/8W
R184	1-215-827-11	s	RES, METAL 75K 1% 1/8W
R185	1-214-533-00	s	RES, METAL 100 1% 1/8W
R186	1-214-549-00	s	RES, METAL 470 1% 1/8W
R187	1-247-895-00	s	RES, CARBON 470K 5% 1/4W
R188	1-214-569-00	s	RES, METAL 3.3K 1% 1/8W
R201	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R202	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R203	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R204	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R205	1-214-592-00	s	RES, METAL 30K 1% 1/8W
R206	1-214-592-00	s	RES, METAL 30K 1% 1/8W
R207	1-215-822-11	s	RES, METAL 47K 1% 1/8W
R208	1-214-563-00	s	RES, METAL 1.8K 1% 1/8W
R210	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R213	1-214-592-00	s	RES, METAL 30K 1% 1/8W
R214	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R215	1-215-820-11	s	RES, METAL 39K 1% 1/8W
R216	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R217	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R218	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R219	1-247-887-00	s	RES, CARBON 220K 5% 1/4W
R220	1-214-554-00	s	RES, METAL 750 1% 1/8W
R222	1-214-545-00	s	RES, METAL 330 1% 1/8W
R223	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R224	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R225	1-214-509-00	s	RES, METAL 10 1% 1/8W
R226	1-214-509-00	s	RES, METAL 10 1% 1/8W
R227	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R230	1-214-575-00	s	RES, METAL 5.6K 1% 1/8W
R231	1-214-541-00	s	RES, METAL 220 1% 1/8W
R232	1-214-577-00	s	RES, METAL 6.8K 1% 1/8W
R234	1-214-579-00	s	RES, METAL 8.2K 1% 1/8W
R235	1-214-558-00	s	RES, METAL 1.1K 1% 1/8W
R236	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R237	1-214-593-00	s	RES, METAL 33K 1% 1/8W
R239	1-215-823-11	s	RES, METAL 51K 1% 1/8W
R240	1-214-574-00	s	RES, METAL 5.1K 1% 1/8W
R241	1-215-821-11	s	RES, METAL 43K 1% 1/8W
R242	1-214-578-00	s	RES, METAL 7.5K 1% 1/8W
R243	1-214-533-00	s	RES, METAL 100 1% 1/8W
R245	1-214-563-00	s	RES, METAL 1.8K 1% 1/8W
R246	1-214-571-00	s	RES, METAL 3.9K 1% 1/8W
R247	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R248	1-214-563-00	s	RES, METAL 1.8K 1% 1/8W
R249	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R250	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R303	1-214-588-00	s	RES, METAL 20K 1% 1/8W
R304	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R305	1-215-820-11	s	RES, METAL 39K 1% 1/8W
R310	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R311	1-214-509-00	s	RES, METAL 10 1% 1/8W
R312	1-214-509-00	s	RES, METAL 10 1% 1/8W
R313	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R316	1-214-575-00	s	RES, METAL 5.6K 1% 1/8W
R317	1-214-541-00	s	RES, METAL 220 1% 1/8W
R320	1-214-579-00	s	RES, METAL 8.2K 1% 1/8W
R321	1-214-588-00	s	RES, METAL 20K 1% 1/8W
R322	1-214-558-00	s	RES, METAL 1.1K 1% 1/8W
R323	1-214-557-00	s	RES, METAL 1K 1% 1/8W
R324	1-215-823-11	s	RES, METAL 51K 1% 1/8W
R325	1-247-883-00	s	RES, CARBON 150K 5% 1/4W
R326	1-215-823-11	s	RES, METAL 51K 1% 1/8W
R327	1-214-541-00	s	RES, METAL 220 1% 1/8W
R328	1-214-574-00	s	RES, METAL 5.1K 1% 1/8W
R368	1-214-565-00	s	RES, METAL 2.2K 1% 1/8W
R401	1-214-581-00	s	RES, METAL 10K 1% 1/8W
R403	1-214-563-00	s	RES, METAL 1.8K 1% 1/8W
R404	1-214-540-00	s	RES, METAL 200 1% 1/8W
R405	1-214-550-00	s	RES, METAL 510 1% 1/8W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(AE-05 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R406	1−214−550−00	s	RES, METAL 510 1% 1/8W
R407	1−214−541−00	s	RES, METAL 220 1% 1/8W
R408	1−214−541−00	s	RES, METAL 220 1% 1/8W
R409	1−214−565−00	s	RES, METAL 2.2K 1% 1/8W
R410	1−214−565−00	s	RES, METAL 2.2K 1% 1/8W
R411	1−214−571−00	s	RES, METAL 3.9K 1% 1/8W
R412	1−214−579−00	s	RES, METAL 8.2K 1% 1/8W
R413	1−214−550−00	s	RES, METAL 510 1% 1/8W
R502	1−214−581−00	s	RES, METAL 10K 1% 1/8W
R503	1−214−554−00	s	RES, METAL 750 1% 1/8W
R504	1−214−557−00	s	RES, METAL 1K 1% 1/8W
R505	1−214−557−00	s	RES, METAL 1K 1% 1/8W
R506	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R507	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R508	1−249−447−11	s	RES, CARBON 1 5% 1/4W
R510	1−214−581−00	s	RES, METAL 10K 1% 1/8W
R511	1−214−554−00	s	RES, METAL 750 1% 1/8W
R512	1−214−557−00	s	RES, METAL 1K 1% 1/8W
R513	1−214−557−00	s	RES, METAL 1K 1% 1/8W
R514	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R515	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R516	1−249−447−11	s	RES, CARBON 1 5% 1/4W
R518	1−214−581−00	s	RES, METAL 10K 1% 1/8W
R519	1−214−554−00	s	RES, METAL 750 1% 1/8W
R520	1−214−561−00	s	RES, METAL 1.5K 1% 1/8W
R521	1−214−553−00	s	RES, METAL 680 1% 1/8W
R522	1−214−553−00	s	RES, METAL 680 1% 1/8W
R523	1−214−561−00	s	RES, METAL 1.5K 1% 1/8W
R524	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R525	1−249−387−11	s	RES, CARBON 3.3 5% 1/4W
R526	1−249−447−11	s	RES, CARBON 1 5% 1/4W
R608	1−215−830−11	s	RES, METAL 100K 1% 1/8W
R609	1−214−525−00	s	RES, METAL 47 1% 1/8W
R610	1−214−525−00	s	RES, METAL 47 1% 1/8W
R611	1−214−581−00	s	RES, METAL 10K 1% 1/8W
R612	1−214−581−00	s	RES, METAL 10K 1% 1/8W
R617	1−214−550−00	s	RES, METAL 510 1% 1/8W
R618	1−214−562−00	s	RES, METAL 1.6K 1% 1/8W
R619	1−214−557−00	s	RES, METAL 1K 1% 1/8W
RB601	1−231−533−00	s	RESISTOR BLOCK, 10K×4
RV101	1−228−458−00	s	RES, VAR, CERMET 5K
RV102	1−228−456−00	s	RES, VAR, CERMET 1K
RV103	1−228−457−00	s	RES, VAR, CERMET 2K
RV104	1−228−476−00	s	RES, VAR, CERMET 50K
RV105	1−228−473−00	s	RES, VAR, CERMET 5K
RV106	1−228−455−00	s	RES, VAR, CERMET 500
RV107	1−228−460−00	s	RES, VAR, CERMET 20K
RV108	1−228−458−00	s	RES, VAR, CERMET 5K
RV109	1−228−460−00	s	RES, VAR, CERMET 20K
RV121	1−228−459−00	s	RES, VAR, CERMET 10K
RV168	1−228−457−00	s	RES, VAR, CERMET 2K
RV201	1−228−472−00	s	RES, VAR, CERMET 2K
RV202	1−228−455−00	s	RES, VAR, CERMET 500
RV203	1−228−459−00	s	RES, VAR, CERMET 10K
RV204	1−228−462−00	s	RES, VAR, CERMET 100K
RV205	1−228−476−00	s	RES, VAR, CERMET 50K
RV206	1−228−462−00	s	RES, VAR, CERMET 100K
RV301	1−228−472−00	s	RES, VAR, CERMET 2K
RV303	1−228−462−00	s	RES, VAR, CERMET 100K
RV304	1−228−477−00	s	RES, VAR, CERMET 100K
RV305	1−228−462−00	s	RES, VAR, CERMET 100K
RV501	1−228−455−00	s	RES, VAR, CERMET 500
RV502	1−228−455−00	s	RES, VAR, CERMET 500
RV503	1−228−455−00	s	RES, VAR, CERMET 500
TH101	1−807−749−11	s	THERMISTOR. POSITIVE 68−OHM
TH102	1−807−749−11	s	THERMISTOR. POSITIVE 68−OHM
TH601	1−800−200−00	s	THERMISTOR S−3K

AH-13 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1−620−899−12	o	PC BOARD, AH−13 WITHOUT COMPONENT
CN432M	1−506−467−31	o	CONNECTOR, 2P, MALE
CN430M	1−506−467−41	o	CONNECTOR, 2P, MALE
CN433M	1−506−471−11	o	CONNECTOR, 6P, MALE

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

AH-15 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1–620–947–12	o	PC BOARD, AH–15 WITHOUT COMPONENT
CN434M	1–506–467–21	o	CONNECTOR, 2P, MALE

BP-10 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1–620–912–11	o	PC BOARD, BP–10 WITHOUT COMPONENT
CN414M	1–506–631–11	o	RECEP, PS 4P, MALE
CN415M	1–506–631–11	o	RECEP, PS 4P, MALE
CN416M	1–506–472–11	o	RECEP, 7P, MALE
CN417M	1–506–469–11	o	RECEP, 4P, MALE
CN418M	1–506–468–11	o	RECEP, 3P, MALE

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

CC-29 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-911-11	o	PC BOARD, CC-29 WITHOUT COMPONENT
CN1	1-562-884-11	o	CONNECTOR, FPC 4P
R1	1-249-413-11	s	RES, CARBON 470 5% 1/6W
R2	1-249-413-11	s	RES, CARBON 470 5% 1/6W

CD-35 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6015-104-A	o	COMPLETE PCB, CD-35
(This assembly includes the following parts.)			
1pc	3-715-590-21	o	LABEL, SERIAL NUMBER
2pcs	3-673-249-00	o	LEVER, PC BOARD
2pcs	7-626-320-11	o	PIN, SPRING 3X8
4pcs	7-628-254-30	s	+PSW, 2.6X10
4pcs	7-622-207-05	s	N 2.6, TYPE 2
4pcs	7-682-647-09	s	SCREW +PWH 3X6
C1	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C3	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C5	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C7	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C9	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C10	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C11	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C12	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C13	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C15	1-161-375-00	s	CAP, CERAMIC 0.0022uF 20% 50V
C16	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C17	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C18	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C29	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C33	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C34	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C39	1-162-286-31	s	CAP, CERAMIC 220PF 10% 50V
C40	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C41	1-161-379-00	s	CAP, CERAMIC 0.01uF 20% 25V
C46	1-162-757-11	s	CAP, CERAMIC 220PF 5% 50V
C48	1-162-757-11	s	CAP, CERAMIC 220PF 5% 50V
C61	1-130-491-00	s	CAP, MYLAR 0.047uF 5% 50V
C62	1-130-491-00	s	CAP, MYLAR 0.047uF 5% 50V
C63	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C64	1-130-491-00	s	CAP, MYLAR 0.047uF 5% 50V
C70	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C71	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C87	1-161-294-31	s	CAP, CERAMIC 1000P 10% 50V
C517	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
CN718M	1-506-748-11	s	RECEP, DIN 96P, MALE
CN719M	1-506-746-11	s	RECEP, DIN 48P, MALE
D2	8-719-933-28	s	DIODE DAP209S
D4	8-719-933-28	s	DIODE DAP209S
D5	8-719-815-55	s	DIODE 1S1555
D10	8-719-933-30	s	DIODE DA210S
D11	8-719-933-30	s	DIODE DA210S
ICA1	8-759-145-58	s	IC uPC4558C
ICA2	8-759-145-58	s	IC uPC4558C
ICA3	8-759-103-06	s	IC uPC398C
ICA4	8-759-240-53	s	IC TC4053BP
ICA5	8-759-240-53	s	IC TC4053BP
ICA13	8-759-001-39	s	IC MC74HC164N
ICA14	8-759-202-24	s	IC TC74HC86P
ICA16	8-759-916-29	s	IC SN74HC74N
ICA18	8-759-202-97	s	IC TC74HC165P
ICA19	8-759-803-70	s	IC LC74HC08
ICA20	8-759-202-11	s	IC TC74HC00P
ICA21	8-759-916-29	s	IC SN74HC74N
ICB1	8-759-990-82	s	IC TL082CP
ICB2	8-759-103-06	s	IC uPC398C
ICB3	8-759-103-19	s	IC uPC319C
ICB4	8-759-103-19	s	IC uPC319C
ICB5	8-759-135-80	s	IC uPC358C
ICB6	8-759-910-43	s	IC CX23028
ICB7	8-759-803-70	s	IC LC74HC08
ICB8	8-759-203-36	s	IC TC74HC374P
ICB9	8-759-203-36	s	IC TC74HC374P
ICB10	8-759-917-05	s	IC SN74HC541N
ICB11	8-759-917-05	s	IC SN74HC541N
ICB12	8-759-938-83	s	IC CF77074NT
ICB15	8-759-916-50	s	IC SN74HC157N
ICB16	8-759-203-01	s	IC TC74HC175P
ICB18	8-759-000-73	s	IC MC14516BCP
ICB19	8-759-001-39	s	IC MC74HC164N

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(CD-35 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
2/(XD-35 BOARD, DVR-1000)D-45			
ICC3	8-759-990-82	s	IC TL082CP
ICC4	8-759-145-58	s	IC uPC4558C
ICC5	8-759-240-52	s	IC TC4052BP
ICC6	8-759-000-77	s	IC MC14520BCP
ICC7	8-759-916-29	s	IC SN74HC74N
ICC8	8-759-107-52	s	IC CXQ71054P
ICC10	8-759-938-83	s	IC CF77074NT
ICC11	8-759-107-52	s	IC CXQ71054P
ICC12	8-759-107-52	s	IC CXQ71054P
ICC14	8-759-107-52	s	IC CXQ71054P
ICC15	8-759-202-11	s	IC TC74HC00P
ICC16	8-759-803-70	s	IC LC74HC08
ICC17	8-759-202-21	s	IC TC74HC32P
ICD2	8-759-990-82	s	IC TL082CP
ICD3	8-759-990-82	s	IC TL082CP
ICD4	8-759-103-93	s	IC upC393C
ICD5	8-759-000-47	s	IC MC14051BCP
ICD6	8-759-202-74	s	IC TC74HC04P
ICD7	8-759-202-26	s	IC TC74HC138P
ICD8	8-759-202-26	s	IC TC74HC138P
ICD9	8-759-202-26	s	IC TC74HC138P
ICD10	8-759-921-34	s	IC SN74HC245N
ICD11	8-759-202-74	s	IC TC74HC04P
ICD12	8-759-203-68	s	IC TC74HC4040P
ICD13	8-759-917-05	s	IC SN74HC541N
ICD14	8-759-203-08	s	IC TC74HC221P
ICD16	8-759-916-35	s	IC SN74HC107N
ICD17	8-759-001-42	s	IC MC74HC174N
ICD18	8-759-001-42	s	IC MC74HC174N
ICD19	8-759-203-68	s	IC TC74HC4040P
ICD20	8-759-788-95	s	IC MBM27C64-CD350211
L1	1-421-329-00	s	COIL, CHOKE
L2	1-421-329-00	s	COIL, CHOKE
L3	1-421-329-00	s	COIL, CHOKE
L4	1-421-329-00	s	COIL, CHOKE
Q1	8-729-697-92	s	TRANSISTOR 2SA979
Q2	8-729-697-92	s	TRANSISTOR 2SA979
R1	1-249-431-11	s	RES, CARBON 15K 5% 1/6W
R6	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R19	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R29	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R30	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R31	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R32	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R33	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R34	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R36	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R39	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R41	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R42	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R44	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R45	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R46	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R47	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R48	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R49	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R50	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R51	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R54	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R55	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R63	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R70	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R77	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R81	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R82	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R83	1-249-424-11	s	RES, CARBON 3.9K 5% 1/6W
R84	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R85	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R86	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R87	1-249-411-11	s	RES, CARBON 330 5% 1/6W

(CD-35 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R90	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R91	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R92	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R94	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R95	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R103	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R104	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R105	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R107	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R108	1-249-432-11	s	RES, CARBON 18K 5% 1/6W
R109	1-249-432-11	s	RES, CARBON 18K 5% 1/6W
R110	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R111	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R114	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R115	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R116	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R117	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R123	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R126	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R127	1-249-393-11	s	RES, CARBON 10 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-235-005-00	s	RESISTOR BLOCK, 47KX8

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

CN-157 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-892-11	o	PC BOARD, CN-157 WITHOUT COMPONENT
CN405	1-562-992-11	o	CONNECTOR, FPC 26P
CN406M	1-506-637-11	o	RECEP, PS 16P, MALE
CN407M	1-506-470-11	o	RECEP, 5P, MALE

CN-191 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-621-346-11	o	PC BOARD, CN-191 WITHOUT COMPONENT
C1	1-162-806-11	s	CAP, CERAMIC 0.1uF 10% 50V
C2	1-162-806-11	s	CAP, CERAMIC 0.1uF 10% 50V
C3	1-162-806-11	s	CAP, CERAMIC 0.1uF 10% 50V
C4	1-162-806-11	s	CAP, CERAMIC 0.1uF 10% 50V

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

CP-106 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6017-145-A	o	COMPLETE PCB, CP-106
(This assembly includes the following parts.)			
BT1	1-528-218-11	s	BATTERY, LITHIUM CR2032WT13H
C1	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C2	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C3	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C4	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C5	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C6	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C7	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C8	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C9	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C10	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C11	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C12	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C13	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C14	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C15	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C16	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C17	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C18	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C19	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
C20	1-163-038-00	s	CAP, CERAMIC 0.1uF 25V
CN501M	1-566-405-21	o	RECEP, 30P, MALE
DL1	1-415-502-11	s	DELAY LINE, 100nS
FB1	1-535-178-00	s	FERRITE BEAD
IC1	8-759-112-41	s	IC uPD71059G
IC2	8-759-112-43	s	IC uPD71054G
IC3	8-759-939-36	s	IC TL7705ACP
IC4	8-759-112-42	s	IC uPD71011G
IC5	8-759-941-28	s	IC MB671131PF
IC6	8-759-104-08	s	IC uPD4364G-15L
IC7	8-759-733-66	s	IC MBM27C512-CP1060130
IC8	8-759-103-24	s	IC uPD7201AD
IC9	8-759-111-90	s	IC uPD7220AD-2
IC10	8-759-939-28	s	IC CXD1102Q
IC11	8-759-112-49	s	IC uPD43256G-10L
IC12	8-759-939-61	s	IC DS1210
IC13	8-759-733-67	s	IC MBM27C512-CP1060230
IC14	8-759-733-65	s	IC MBM27C512-CP1060330
IC15	8-759-105-75	s	IC uPD70108D-8
IC16	8-759-107-02	s	IC uPD74HC245G
IC17	8-759-205-23	s	IC TC74HC244F
IC18	8-759-204-98	s	IC TC74HC08F
IC19	8-759-112-49	s	IC uPD43256G-10L
R1	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R2	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R3	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R4	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R5	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R6	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R7	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R8	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R9	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R10	1-249-415-11	s	RES, CARBON 680 5% 1/6W
R11	1-249-415-11	s	RES, CARBON 680 5% 1/6W
R12	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
S1	1-553-856-00	s	SWITCH, PUSH
X1	1-567-817-11	s	CRYSTAL 29.4912MHz

CS-21 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-910-11	o	PC BOARD, CS-21 WITHOUT COMPONENT
CN1M	1-506-473-11	o	RECEP, 8P, MALE
CN2	1-562-884-11	o	CONNECTOR, FPC 4P
R1	1-249-413-11	s	RES, CARBON 470 5% 1/6W
R2	1-249-413-11	s	RES, CARBON 470 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

CS-27 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1−632−588−11	o	PC BOARD, CS-27 WITHOUT COMPONENT
C6	1−162−788−11	s	CAP, CERAMIC 0.003uF 10% 50V
C7	1−162−788−11	s	CAP, CERAMIC 0.003uF 10% 50V
CN1	1−566−480−11	o	PIN, SOCKET 8P
CN2	1−566−480−11	o	PIN, SOCKET 8P
IC1	8−759−990−84	s	IC TL084CN

CT-74 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A−6023−041−A	o	COMPLETE PCB, CT−74
(This assembly includes the following parts.)			
C2	1−161−898−11	s	CAP, CERAMIC 0.47uF 50V
C3	1−161−898−11	s	CAP, CERAMIC 0.47uF 50V
C5	1−130−471−00	s	CAP, MYLAR 0.001uF 5% 50V
C6	1−130−471−00	s	CAP, MYLAR 0.001uF 5% 50V
C7	1−130−471−00	s	CAP, MYLAR 0.001uF 5% 50V
C10	1−130−494−11	s	CAP, MYLAR 0.082uF 5% 50V
C12	1−131−347−00	s	CAP, TANT 1uF 10% 35V
C14	1−130−494−11	s	CAP, MYLAR 0.082uF 5% 50V
C15	1−130−475−00	s	CAP, MYLAR 0.0022uF 5% 50V
CN121M	1−560−301−00	o	RECEP, IL 4P, MALE
CN122M	1−560−302−00	o	RECEP, IL 5P, MALE
CN123M	1−560−304−00	o	RECEP, IL 8P, MALE
D1	8−719−911−19	s	DIODE 1SS119
D2	8−719−911−19	s	DIODE 1SS119
D3	8−719−911−19	s	DIODE 1SS119
D4	8−719−100−54	s	DIODE RD9.1E−B2
D5	8−719−911−19	s	DIODE 1SS119
D6	8−719−911−19	s	DIODE 1SS119
IC1	8−759−201−04	s	IC TC40107BP
IC2	8−759−040−11	s	IC MC14011BCP
IC3	8−759−045−38	s	IC MC14538BCP
IC4	8−759−045−84	s	IC MC14584BCP
IC5	8−759−133−90	s	IC uPC339C
IC6	8−759−340−13	s	IC HD14013BP
IC7	8−759−937−59	s	IC MB3759
L1	1−421−329−00	s	COIL, CHOKE
Q1	8−729−900−65	s	TRANSISTOR DTA144ES
Q2	8−729−900−65	s	TRANSISTOR DTA144ES
Q3	8−729−900−65	s	TRANSISTOR DTA144ES
Q4	8−729−904−36	s	TRANSISTOR DTC114YS
R1	1−249−433−11	s	RES, CARBON 22K 5% 1/6W
R2	1−249−441−11	s	RES, CARBON 100K 5% 1/6W
R6	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R7	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R8	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R9	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R10	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R11	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R12	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R13	1−249−441−11	s	RES, CARBON 100K 5% 1/6W
R14	1−249−427−11	s	RES, CARBON 6.8K 5% 1/6W
R15	1−249−414−11	s	RES, CARBON 560 5% 1/6W
R16	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R17	1−249−441−11	s	RES, CARBON 100K 5% 1/6W
R22	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R23	1−249−423−11	s	RES, CARBON 3.3K 5% 1/6W
R24	1−249−431−11	s	RES, CARBON 15K 5% 1/6W
R26	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R36	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
RV1	1−230−844−11	s	RES, VAR, METAL 20K
RV2	1−230−843−11	s	RES, VAR, METAL 10K

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

DE-17 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-913-11	o	PC BOARD, DE-17 WITHOUT COMPONENT

DET-3 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-618-489-11	o	PC BOARD, DET-3 WITHOUT COMPONENT
1pc	3-673-694-00	o	HOLDER, DME
1pc	7-685-133-19	s	SCREW +BTP 2.6X6, TYPE2 N-S
C1	1-102-074-00	s	CAP, CERAMIC 0.001uF 10% 50V
C2	1-124-224-00	s	CAP, ELECT 47uF 20% 6.3V
CN1M	1-564-016-00	o	RECEP, 6P, MALE
D1	8-719-911-19	s	DIODE 1SS119
DME1	8-749-021-10	s	DME DM-211
IC1	8-759-103-93	s	IC uPC393C
R2	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R3	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
RV1	1-228-469-00	s	RES, VAR, CERMET 200
RV2	1-228-469-00	s	RES, VAR, CERMET 200

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

FC-37 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6026-071-A	o	MOUNTED PCB, FC-37
(This assembly includes the following parts.)			
CN210M	1-506-637-11	o	CONNECTOR, PS 16P, MALE
CN211M	1-506-637-11	o	CONNECTOR, PS 16P, MALE
CN212M	1-506-637-11	o	CONNECTOR, PS 16P, MALE
CN213M	1-506-637-11	o	CONNECTOR, PS 16P, MALE
CN214M	1-506-636-11	o	RECEP, PS 14P, MALE
CN215M	1-506-636-11	o	RECEP, PS 14P, MALE
CN216M	1-506-468-11	o	RECEP, 3P, MALE
CN217M	1-506-632-11	o	RECEP, PS 6P, MALE
CN218M	1-506-631-11	o	RECEP, PS 4P, MALE
CN219M	1-506-632-11	o	RECEP, PS 6P, MALE
CN220M	1-506-631-11	o	RECEP, PS 4P, MALE
CN221M	1-506-633-11	o	RECEP, PS 8P, MALE
CN222M	1-506-636-11	o	RECEP, PS 14P, MALE
CN223M	1-506-636-11	o	RECEP, PS 14P, MALE

FP-24 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-914-11	o	PC BOARD, FP-24 WITHOUT COMPONENT
CN204M	1-506-633-11	o	RECEP, PS 8P, MALE
CN207F	1-563-769-11	s	RECEP, ROUND 8P, FEMALE

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

IF-134 BOARD, DVR-1000

The following components are included in the RS-422 PANEL (B) assy; A-6032-081-A.

Ref. No. or Qty	Part No.	SP	Description
1pc	7-622-207-05	s	N 2.6, TYPE 2
1pc	7-628-254-30	s	+PSW, 2.6X10
1pc	7-682-648-09	s	SCREW +PSW 3X8
1pc	7-622-207-05	s	N 2.6, TYPE 2
1pc	7-628-254-30	s	+PSW, 2.6X10
5pcs	7-682-648-09	s	SCREW +PSW 3X8
C2	1-124-638-11	s	CAP, ELECT 22uF 20% 10V
C5	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C6	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C7	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C8	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C10	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C11	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C12	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
C13	1-162-216-31	s	CAP, CERAMIC 51PF 5% 50V
CN1M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN2F	1-563-323-11	s	RECEP, D-SUB 9P, FEMALE
CN3F	1-563-323-11	s	RECEP, D-SUB 9P, FEMALE
CN4F	1-563-323-11	s	RECEP, D-SUB 9P, FEMALE
FB1	1-535-178-00	s	FERRITE BEAD
IC1	8-759-925-85	s	IC SN74HC32NS
IC2	8-759-927-46	s	IC SN74HC00NS
IC3	8-759-926-12	s	IC SN74HC139NS
IC4	8-759-011-65	s	IC MC74HC4053F
IC5	8-759-926-12	s	IC SN74HC273NS
IC6	8-759-925-74	s	IC SN74HC04NS
IC7	8-759-926-12	s	IC SN74HC273NS
IC8	8-759-011-65	s	IC MC74HC4053F
IC9	8-759-926-77	s	IC SN74HC541NS
IC10	8-759-011-65	s	IC MC74HC4053F
IC11	8-759-926-30	s	IC AM26LS30PC
IC12	8-759-012-63	s	IC MC3486P
IC13	8-759-926-30	s	IC AM26LS30PC
IC14	8-759-012-63	s	IC MC3486P
R1	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R2	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R3	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R4	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R5	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R6	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-235-005-00	s	RESISTOR BLOCK, 47KX8

IF-135 BOARD, DVR-1000

The following components are included in the CN-B PANEL assy; A-6032-070-A.

Ref. No. or Qty	Part No.	SP	Description
1pc	7-622-207-05	s	N 2.6, TYPE 2
1pc	7-628-254-30	s	+PSW, 2.6X10
1pc	7-682-648-09	s	SCREW +PSW 3X8
1pc	7-622-207-05	s	N 2.6, TYPE 2
1pc	7-628-254-30	s	+PSW, 2.6X10
1pc	7-682-648-09	s	SCREW +PSW 3X8
C1	1-124-638-11	s	CAP, ELECT 22uF 20% 10V
CN1M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN2	1-562-815-11	s	CONNECTOR, GP-IB
FB1	1-535-178-00	s	FERRITE BEAD
IC1	8-759-202-74	s	IC TC74HC04P
IC2	8-759-202-89	s	IC TC74HC139P
IC3	8-759-112-34	s	IC uPD7210C
IC4	8-759-905-03	s	IC SN75161AN
IC5	8-759-917-05	s	IC SN74HC541N
IC6	8-759-905-02	s	IC SN75160AN
IC7	8-759-202-21	s	IC TC74HC32P
R1	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R2	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R3	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R4	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R5	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB3	1-235-005-00	s	RESISTOR BLOCK, 47KX8

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

IF-138 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6021-001-A	o	COMPLETE PCB, IF-138

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
6pcs	7-622-207-05	s	N 2.6, TYPE 2
6pcs	7-628-254-20	s	+PSW, 2.6X8
2pcs	3-531-576-01	s	RIVET
BT1	1-528-218-11	s	BATTERY, LITHIUM CR2032WT13H
C4	1-124-638-11	s	CAP, ELECT 22uF 20% 10V
C8	1-125-390-11	s	CAP, CERAMIC 0.047F 5.5V
C13	1-162-211-31	s	CAP, CERAMIC 33PF 5% 50V
C16	1-162-807-11	s	CAP, CERAMIC 0.12uF 10% 50V
CN1	1-566-385-11	s	PIN, CONNECTOR 2P
CN2	1-566-385-11	s	PIN, CONNECTOR 2P
CN801M	1-560-731-00	o	RECEP, 50P, MALE
CN802F	1-563-335-11	s	RECEP, 48P, FEMALE
CN803F	1-563-335-11	s	RECEP, 48P, FEMALE
CN804F	1-563-335-11	s	RECEP, 48P, FEMALE
D1	8-719-911-19	s	DIODE 1SS119
D2	8-719-101-97	s	DIODE 1SS97-1
D3	8-719-911-19	s	DIODE 1SS119
D4	8-719-911-19	s	DIODE 1SS119
D6	8-719-911-19	s	DIODE 1SS119
FB1	1-535-178-00	s	FERRITE BEAD
FB2	1-535-178-00	s	FERRITE BEAD
FB3	1-535-178-00	s	FERRITE BEAD
IC1	8-759-921-34	s	IC SN74HC245N
IC2	8-759-203-48	s	IC TC74HC573P
IC3	8-759-921-34	s	IC SN74HC245N
IC4	8-759-203-48	s	IC TC74HC573P
IC5	8-759-914-41	s	IC X2212P
IC6	8-759-914-41	s	IC X2212P
IC7	8-759-917-05	s	IC SN74HC541N
IC8	8-759-916-79	s	IC SN74HC273N
IC9	8-759-112-44	s	IC uPD7506CT-211
IC10	8-759-804-69	s	IC LC74HC04M
JS1	1-563-859-11	s	RECEPTACLE, CONNECTOR 2P
Q1	8-729-900-45	s	TRANSISTOR DTC114EF
R1	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R2	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R4	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R5	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R6	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R7	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R10	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R11	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-231-450-00	s	RESISTOR BLOCK, 3.3KX8
RB3	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB4	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB5	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB6	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB7	1-231-549-11	s	RESISTOR BLOCK, 47KX4
RB8	1-231-549-11	s	RESISTOR BLOCK, 47KX4
S1	1-553-856-00	s	SWITCH, PUSH
X1	1-527-990-00	s	CRYSTAL 32.768KHz

IF-221 BOARD, DVR-1000

The following components are included in the
PARALLEL I/O PANEL assy; A-6032-080-A.

Ref. No. or Qty	Part No.	SP	Description
1pc	X-3715-492-1	o	PANEL ASSY, PARALLEL I/O
2pcs	7-622-207-05	s	N2.6, TYPE 2
2pcs	7-628-254-30	s	SCREW +PS2.6×10
2pcs	7-682-648-09	s	SCREW +PS3×8
C1	1-126-153-11	s	CAP, ELECT 22uF 20% 6.3V
C2	1-163-038-00	s	CAP, CHIP CERAMIC 0.1uF 25V
C3	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C4	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C5	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C6	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C7	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C8	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C9	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C10	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C11	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C12	1-163-117-00	s	CAP, CHIP CERAMIC 100PF 5% 50V
C13	1-163-038-00	s	CAP, CHIP CERAMIC 0.1uF 25V
C14	1-163-038-00	s	CAP, CHIP CERAMIC 0.1uF 25V
C15	1-163-038-00	s	CAP, CHIP CERAMIC 0.1uF 25V
CN1M	1-506-746-11	s	RECEP. DIN 48P, MALE
CN2	1-563-781-00	s	RECEP. D-SUB 50P
FB1	1-535-178-00	s	FERRITE BEAD
IC1	8-759-926-12	s	IC SN74HC139NS
IC2	8-759-926-77	s	IC SN74HC541NS
IC3	8-759-925-85	s	IC SN74HC32NS
IC4	8-759-925-90	s	IC SN74HC74NS
IC5	8-759-938-68	s	IC CXD1095Q
IC6	8-759-938-68	s	IC CXD1095Q
IC7	8-759-925-80	s	IC SN74HC14NS
IC8	8-759-925-80	s	IC SN74HC14NS
Q1	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q2	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q3	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q4	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q5	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q6	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q7	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q8	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q9	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q10	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q11	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q12	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q13	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q14	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q15	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q16	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q17	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q18	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q19	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q20	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q21	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q22	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q23	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q24	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q25	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q26	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q27	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q28	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q29	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q30	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q31	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q32	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q33	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q34	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q35	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q36	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q37	8-729-900-53	s	TRANSISTER DTC114EK-T-96
Q38	8-729-900-53	s	TRANSISTER DTC114EK-T-96
R1	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R2	1-216-089-00	s	RES, CHIP 47K 5% 1/10W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(IF-221 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R3	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R4	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R5	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R6	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R7	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R8	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R9	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R10	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R11	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R12	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R13	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R14	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R15	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R16	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R17	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R18	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R19	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R20	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R21	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R22	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R23	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R24	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R25	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R26	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R27	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R28	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R29	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R30	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R31	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R32	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R33	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R34	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R35	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R36	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R37	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R38	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R39	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R40	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R41	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R42	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R43	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R44	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R45	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R46	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R47	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R48	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R49	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R50	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R51	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R52	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R53	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R54	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R55	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R56	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R57	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R58	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R59	1-216-065-00	s	RES, CHIP 4.7K 5% 1/10W
R60	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R61	1-216-089-00	s	RES, CHIP 47K 5% 1/10W
R62	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R63	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R64	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R65	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R66	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R67	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R68	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R69	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R70	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R71	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R72	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R73	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R74	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R75	1-216-073-00	s	RES, CHIP 10K 5% 1/10W
R76	1-216-073-00	s	RES, CHIP 10K 5% 1/10W

LE-52 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description

The following components are included in the CD BLOCK assy; A-6029-012-E.

Ref. No. or Qty	Part No.	SP	Description
D1	8-719-123-69	s	DIODE SE310
D2	8-719-123-69	s	DIODE SE310
D3	8-719-123-69	s	DIODE SE310
D4	8-719-123-69	s	DIODE SE310
D5	8-719-123-69	s	DIODE SE310
R1	1-247-823-00	s	RES, CARBON 470 5% 1/6W
R2	1-247-823-00	s	RES, CARBON 470 5% 1/6W
R3	1-247-823-00	s	RES, CARBON 470 5% 1/6W
R4	1-247-823-00	s	RES, CARBON 470 5% 1/6W
R5	1-247-823-00	s	RES, CARBON 470 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

LE-56 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6025-105-A	o	COMPLETE PCB, LE-56
(This assembly includes the following parts.)			
1pc	3-674-390-00	o	HOLDER (B), LED
1pc	1-620-908-11	o	PC BOARD, LE-56 WITHOUT COMPONENT
CN203M	1-506-487-11	o	RECEP, 8P, MALE
D1	8-719-905-54	s	DIODE EBG5504S
D2	8-719-905-54	s	DIODE EBG5504S
D3	8-719-905-54	s	DIODE EBG5504S
D4	8-719-955-25	s	DIODE PY5525S
R1	1-249-408-11	s	RES, CARBON 180 5% 1/6W

LO-05 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6013-082-A	o	COMPLETE PCB, LO-05
(This assembly includes the following parts.)			
16pcs	7-628-254-10	s	+PSW, 2.6X6
16pcs	7-628-253-20	s	SCREW +PS 2X6
C3	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C6	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C10	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C13	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C16	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C20	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C21	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C24	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C26	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C29	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
C32	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C36	1-124-657-00	s	CAP, ELECT, NONPOLAR, 10uF 20% 50V
CN910M	1-506-471-11	o	CONNECTOR, 6P, MALE
CN911M	1-506-471-11	o	CONNECTOR, 6P, MALE
CN912M	1-506-632-11	o	RECEP, PS 6P, MALE
CN913M	1-506-468-31	o	RECEP, 3P, MALE
CN914M	1-506-470-11	o	CONECTOR, 5P, MALE
CN915M	1-506-468-21	o	RECEP, 3P, MALE
CN916M	1-560-300-00	o	RECEP, IL 3P, MALE
D1	8-719-815-55	s	DIODE 1S1555
D2	8-719-815-55	s	DIODE 1S1555
D3	8-719-815-55	s	DIODE 1S1555
D4	8-719-815-55	s	DIODE 1S1555
D5	8-719-815-55	s	DIODE 1S1555
D6	8-719-815-55	s	DIODE 1S1555
D7	8-719-815-55	s	DIODE 1S1555
D8	8-719-815-55	s	DIODE 1S1555
D9	8-719-815-55	s	DIODE 1S1555
D10	8-719-815-55	s	DIODE 1S1555
D11	8-719-815-55	s	DIODE 1S1555
IC1	8-759-745-60	s	IC NJM4560D
IC2	8-759-745-60	s	IC NJM4560D
IC3	8-759-745-60	s	IC NJM4560D
IC4	8-759-745-60	s	IC NJM4560D
L1	1-421-370-00	s	COIL, CHOKE
L2	1-421-370-00	s	COIL, CHOKE
L3	1-421-370-00	s	COIL, CHOKE
L4	1-421-370-00	s	COIL, CHOKE
L5	1-421-370-00	s	COIL, CHOKE
Q1	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q2	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q3	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q4	8-729-307-58	s	TRANSISTOR 2SC1775A
Q5	8-729-307-58	s	TRANSISTOR 2SC1775A
Q6	8-729-307-58	s	TRANSISTOR 2SC1775A
Q7	8-729-316-22	s	TRANSISTOR 2SC1162-C
Q8	8-729-371-53	s	TRANSISTOR 2SA715
Q9	1-807-103-11	s	TRANSISTOR DTC114YS
Q10	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q11	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q12	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q13	8-729-307-58	s	TRANSISTOR 2SC1775A
Q14	8-729-307-58	s	TRANSISTOR 2SC1775A
Q15	8-729-307-58	s	TRANSISTOR 2SC1775A
Q16	8-729-316-22	s	TRANSISTOR 2SC1162-C
Q17	8-729-371-53	s	TRANSISTOR 2SA715
Q18	8-729-900-63	s	TRANSISTOR DTA124ES
Q19	8-729-900-36	s	TRANSISTOR DTC124ES
Q20	8-729-900-63	s	TRANSISTOR DTA124ES
Q21	1-807-103-11	s	TRANSISTOR DTC114YS
Q22	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q23	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q24	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q25	8-729-307-58	s	TRANSISTOR 2SC1775A
Q26	8-729-307-58	s	TRANSISTOR 2SC1775A
Q27	8-729-307-58	s	TRANSISTOR 2SC1775A
Q28	8-729-316-22	s	TRANSISTOR 2SC1162-C
Q29	8-729-371-53	s	TRANSISTOR 2SA715

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(LO-05 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
Q30	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q31	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q32	8-729-307-28	s	TRANSISTOR 2SA872A-E
Q33	8-729-307-58	s	TRANSISTOR 2SC1775A
Q34	8-729-307-58	s	TRANSISTOR 2SC1775A
Q35	8-729-307-58	s	TRANSISTOR 2SC1775A
Q36	8-729-316-22	s	TRANSISTOR 2SC1162-C
Q37	8-729-371-53	s	TRANSISTOR 2SA715
Q38	1-807-103-11	s	TRANSISTOR DTC114YS
Q39	1-807-103-11	s	TRANSISTOR DTC114YS
R1	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R2	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R4	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R6	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R7	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R8	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R9	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R12	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R14	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R15	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R17	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R19	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R20	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R21	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R22	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R25	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R26	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R28	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R29	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R30	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R31	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R33	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R34	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R35	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R36	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R39	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R40	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R41	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R42	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R43	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R45	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R46	1-249-449-11	s	RES, CARBON 1.5 5% 1/4W
R47	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R48	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R51	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
RV1	1-230-843-11	s	RES, VAR, METAL 10K
RV2	1-230-843-11	s	RES, VAR, METAL 10K
RV3	1-230-843-11	s	RES, VAR, METAL 10K
RV4	1-230-843-11	s	RES, VAR, METAL 10K
RY1	1-515-683-11	s	RELAY
RY2	1-515-683-11	s	RELAY
RY3	1-515-683-11	s	RELAY
RY4	1-515-683-11	s	RELAY
T1	1-427-518-00	s	TRANSFORMER, AUDIO OUTPUT
T2	1-427-518-00	s	TRANSFORMER, AUDIO OUTPUT
T3	1-427-518-00	s	TRANSFORMER, AUDIO OUTPUT
T4	1-427-518-00	s	TRANSFORMER, AUDIO OUTPUT

MB-133 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6025-108-A	o	COMPLETE PCB, MB-133

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
26pcs	7-628-254-20	s	+PSW, 2.6X8
26pcs	7-622-207-05	s	N 2.6, TYPE 2
CN701M	1-506-637-11	o	CONNECTOR, PS 16P, MALE
CN702M	1-506-467-11	o	CONNECTOR, 2P, MALE
CN703M	1-506-473-11	o	RECEP, 8P, MALE
CN704M	1-506-628-11	o	RECEP, PS 26P, MALE
CN705F	1-563-337-11	s	RECEP, 96P, FEMALE
CN706F	1-563-335-11	s	RECEP, 48P, FEMALE
CN707M	1-506-618-11	o	RECEP, PS 6P, MALE
CN708M	1-506-475-11	o	RECEP, 10P, MALE
CN709M	1-506-484-11	o	RECEP, 5P, MALE
CN710M	1-506-482-11	o	RECEP, 3P, MALE
CN711M	1-506-635-11	o	RECEP, PS 12P, MALE
CN712M	1-506-622-11	o	RECEP, PS 14P, MALE
CN713F	1-563-337-11	s	RECEP, 96P, FEMALE
CN714F	1-563-335-11	s	RECEP, 48P, FEMALE
CN715F	1-563-335-11	s	RECEP, 48P, FEMALE
CN716M	1-506-621-11	o	RECEP, PS 12P, MALE
CN717M	1-506-485-11	o	RECEP, 6P, MALE
CN718F	1-563-337-11	s	RECEP, 96P, FEMALE
CN719F	1-563-335-11	s	RECEP, 48P, FEMALE
CN720F	1-563-337-11	s	RECEP, 96P, FEMALE
CN721F	1-563-335-11	s	RECEP, 48P, FEMALE
CN722F	1-563-337-11	s	RECEP, 96P, FEMALE
CN723F	1-563-335-11	s	RECEP, 48P, FEMALE
CN724F	1-563-337-11	s	RECEP, 96P, FEMALE
CN725F	1-563-335-11	s	RECEP, 48P, FEMALE
CN726M	1-506-485-21	o	RECEP, 6P, MALE
CN727M	1-560-731-00	o	RECEP, 50P, MALE
CN728M	1-560-753-00	o	RECEP, 5P, MALE
CN729M	1-506-494-11	o	RECEP, 15P, MALE
CN730M	1-506-632-11	o	RECEP, PS 6P, MALE
CN731M	1-506-486-11	o	RECEP, 7P, MALE
CN732M	1-506-617-11	o	RECEP, PS 4P, MALE

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

MB-137 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6023-044-A	o	COMPLETE PCB, MB-137
(This assembly includes the following parts.)			
1pc	1-564-831-11	o	TERMINAL
4pcs	7-622-207-05	s	N 2.6, TYPE 2
4pcs	7-628-254-20	s	+PSW, 2.6X8
CN105F (to PS-138 board)			
	1-563-120-11	o	HOUSING, PS 12P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN131F	1-563-335-11	s	RECEP, 48P, FEMALE
CN132F	1-563-337-11	s	RECEP, 96P, FEMALE
CN133F (to MB-137 board)			
	1-563-119-11	o	HOUSING, PS 10P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN133M	1-506-634-11	o	RECEP, PS 10P, MALE
CN134F (to MB-137 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN134M	1-506-632-11	o	RECEP, PS 6P, MALE
CN135F (to MB-137 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN135M	1-506-467-11	o	RECEP, 2P, MALE
CN211F (to FC-37 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN213F (to FC-37 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN215F (to FC-37 board)			
	1-563-121-11	o	HOUSING, PS 14P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN217F (to FC-37 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN221F (to FC-37 board)			
	1-563-118-11	o	HOUSING, PS 8P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN223F (to FC-37 board)			
	1-563-121-11	o	HOUSING, PS 14P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN930F (to PD-36 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30

MD-43 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6023-042-A	o	COMPLETE PCB, MD-43
(This assembly includes the following parts.)			
1pc	7-622-207-05	s	N 2.6, TYPE 2
1pc	7-628-254-10	s	+PSW, 2.6X6
1pc	7-628-254-30	s	+PSW, 2.6X10
1pc	7-628-254-20	s	+PSW, 2.6X8
1pc	7-682-648-09	s	SCREW +PSW 3X8
19pcs	2-832-007-00	s	BUSHING (K), INSULATING
27pcs	7-628-254-20	s	+PSW, 2.6X8
3pcs	7-622-207-05	s	N 2.6, TYPE 2
5pcs	7-628-254-10	s	+PSW, 2.6X6
3pcs	7-628-254-30	s	+PSW, 2.6X10
5pcs	7-682-648-09	s	SCREW +PSW 3X8
C5	1-124-247-00	s	CAP, ELECT 10uF 20% 35V
C6	1-124-247-00	s	CAP, ELECT 10uF 20% 35V
C7	1-124-247-00	s	CAP, ELECT 10uF 20% 35V
C8	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C101	1-130-478-00	s	CAP, MYLAR 0.0039uF 5% 50V
C102	1-130-478-00	s	CAP, MYLAR 0.0039uF 5% 50V
C103	1-162-810-11	s	CAP, CERAMIC 0.22uF 10% 50V
C104	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C105	1-126-112-11	s	CAP, ELECT 5.6uF 20% 100V
C106	1-126-111-11	s	CAP, ELECT 3.3uF 20% 100V
C107	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C108	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C109	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C110	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C201	1-130-478-00	s	CAP, MYLAR 0.0039uF 5% 50V
C202	1-162-810-11	s	CAP, CERAMIC 0.22uF 10% 50V
C203	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C204	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C205	1-126-112-11	s	CAP, ELECT 5.6uF 20% 100V
C206	1-126-111-11	s	CAP, ELECT 3.3uF 20% 100V
C207	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C213	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C214	1-124-969-11	s	ELECT 4.7uF 20% 50V
C215	1-124-969-11	s	ELECT 4.7uF 20% 50V
C216	1-124-969-11	s	ELECT 4.7uF 20% 50V
C301	1-130-478-00	s	CAP, MYLAR 0.0039uF 5% 50V
C302	1-162-810-11	s	CAP, CERAMIC 0.22uF 10% 50V
C303	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C304	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C305	1-126-112-11	s	CAP, ELECT 5.6uF 20% 100V
C306	1-126-111-11	s	CAP, ELECT 3.3uF 20% 100V
C307	1-126-147-11	s	CAP, ELECT 120uF 20% 63V
C313	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C314	1-249-969-11	s	ELECT 4.7uF 20% 50V
C315	1-249-969-11	s	ELECT 4.7uF 20% 50V
C316	1-249-969-11	s	ELECT 4.7uF 20% 50V
C403	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C404	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C503	1-124-638-11	s	CAP, ELECT 22uF 20% 10V
C504	1-124-927-11	s	CAP, ELECT 4.7uF 20% 50V
C505	1-124-927-11	s	CAP, ELECT 4.7uF 20% 50V
C510	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C511	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C512	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C513	1-130-487-00	s	CAP, MYLAR 0.022uF 5% 50V
C514	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C515	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C516	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
CN131M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN132M	1-506-748-11	s	RECEP, DIN 96P, MALE
CP101	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP201	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP301	1-235-966-11	s	CR BLOCK, C=2200PF R=20
D1	8-719-933-30	s	DIODE DA210S
D101	8-719-100-86	s	DIODE RD22E-B2
D102	8-719-900-95	s	DIODE ERB44-02
D103	8-719-911-19	s	DIODE 1SS119
D104	8-719-911-19	s	DIODE 1SS119

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(MD-43 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
D105	8-719-911-19	s	DIODE 1SS119
D106	8-719-911-06	s	DIODE 1SS106
D201	8-719-900-95	s	DIODE ERB44-02
D202	1-806-660-11	s	DIODE ESAB85-009
D203	8-719-912-51	s	DIODE ESAC25-04C
D204	8-719-912-51	s	DIODE ESAC25-04C
D205	8-719-912-51	s	DIODE ESAC25-04C
D206	8-719-911-19	s	DIODE 1SS119
D207	8-719-911-19	s	DIODE 1SS119
D208	8-719-911-19	s	DIODE 1SS119
D301	8-719-900-95	s	DIODE ERB44-02
D302	1-806-660-11	s	DIODE ESAB85-009
D303	8-719-912-51	s	DIODE ESAC25-04C
D304	8-719-912-51	s	DIODE ESAC25-04C
D305	8-719-912-51	s	DIODE ESAC25-04C
D306	8-719-911-19	s	DIODE 1SS119
D307	8-719-911-19	s	DIODE 1SS119
D308	8-719-911-19	s	DIODE 1SS119
D501	8-719-911-19	s	DIODE 1SS119
D502	1-807-200-11	s	DIODE S5277B
D503	1-807-200-11	s	DIODE S5277B
D505	8-719-911-19	s	DIODE 1SS119
D506	8-719-911-19	s	DIODE 1SS119
D507	8-719-911-19	s	DIODE 1SS119
D508	8-719-911-19	s	DIODE 1SS119
IC1	8-759-700-11	s	IC NJM78M05A
IC3	8-759-133-90	s	IC uPC339C
IC101	8-741-132-00	s	IC BX1320
IC102	8-741-128-10	s	IC BX1281
IC103	8-741-128-10	s	IC BX1281
IC104	8-759-208-45	s	IC MP6901
IC201	8-741-132-10	s	IC BX1321
IC202	8-759-939-48	s	IC FT5761M
IC203	8-759-250-20	s	IC TC5020BP
IC301	8-741-132-10	s	IC BX1321
IC302	8-759-939-48	s	IC FT5761M
IC303	8-759-250-20	s	IC TC5020BP
IC401	8-759-135-80	s	IC uPC358C
IC501	8-759-925-26	s	IC CX23026
IC502	8-759-000-89	s	IC MC14556BCP
IC503	8-759-205-56	s	IC TA7267P
IC504	8-759-208-51	s	IC TA7257P
IC505	8-759-135-80	s	IC uPC358C
IC506	8-759-208-51	s	IC TA7257P
IC507	8-759-208-51	s	IC TA7257P
L1	1-421-329-00	s	COIL, CHOKE
L2	1-421-329-00	s	COIL, CHOKE
L3	1-421-329-00	s	COIL, CHOKE
L101	1-410-316-11	s	INDUCTOR, 1uH 20%
L102	1-410-316-11	s	INDUCTOR, 1uH 20%
L103	1-421-329-00	s	COIL, CHOKE
L104	1-413-090-00	s	COIL, SN
L105	1-421-329-00	s	COIL, CHOKE
L201	1-410-316-11	s	INDUCTOR, 1uH 20%
L202	1-421-329-00	s	COIL, CHOKE
L203	1-413-090-00	s	COIL, SN
L204	1-421-329-00	s	COIL, CHOKE
L301	1-410-316-11	s	INDUCTOR, 1uH 20%
L302	1-421-329-00	s	COIL, CHOKE
L303	1-413-090-00	s	COIL, SN
L304	1-421-329-00	s	COIL, CHOKE
Q1	8-729-900-36	s	TRANSISTOR DTC124ES
Q2	8-729-900-36	s	TRANSISTOR DTC124ES
Q3	8-729-374-02	s	TRANSISTOR 2SB740
Q101	8-729-304-36	s	TRANSISTOR 2SK428
Q102	8-729-304-35	s	TRANSISTOR 2SJ122
Q103	8-729-900-36	s	TRANSISTOR DTC124ES
Q104	8-729-900-36	s	TRANSISTOR DTC124ES
Q105	8-729-900-36	s	TRANSISTOR DTC124ES
Q201	8-729-904-38	s	TRANSISTOR 2SD1118
Q202	8-729-904-38	s	TRANSISTOR 2SD1118

(MD-43 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
Q203	8-729-904-38	s	TRANSISTOR 2SD1118
Q204	8-729-304-35	s	TRANSISTOR 2SJ122
Q205	8-729-900-36	s	TRANSISTOR DTC124ES
Q206	8-729-900-36	s	TRANSISTOR DTC124ES
Q207	8-729-900-36	s	TRANSISTOR DTC124ES
Q301	8-729-904-38	s	TRANSISTOR 2SD1118
Q302	8-729-904-38	s	TRANSISTOR 2SD1118
Q303	8-729-904-38	s	TRANSISTOR 2SD1118
Q304	8-729-304-35	s	TRANSISTOR 2SJ122
Q305	8-729-900-36	s	TRANSISTOR DTC124ES
Q306	8-729-900-36	s	TRANSISTOR DTC124ES
Q307	8-729-900-36	s	TRANSISTOR DTC124ES
Q401	8-729-804-91	s	TRANSISTOR 2SD1682-S
Q402	8-729-804-86	s	TRANSISTOR 2SB1142-S
Q403	8-729-100-12	s	TRANSISTOR 2SC2001-L
Q501	8-729-900-36	s	TRANSISTOR DTC124ES
Q502	8-729-804-86	s	TRANSISTOR 2SB1142-S
Q503	8-729-900-36	s	TRANSISTOR DTC124ES
Q504	8-729-900-36	s	TRANSISTOR DTC124ES
Q505	8-729-384-46	s	TRANSISTOR 2SA844-C
Q506	8-729-384-46	s	TRANSISTOR 2SA844-C
Q507	8-729-199-82	s	TRANSISTOR 2SD998
Q508	8-729-199-82	s	TRANSISTOR 2SD998
Q510	8-729-224-02	s	TRANSISTOR 2SC2240-BL
Q511	8-729-224-02	s	TRANSISTOR 2SC2240-BL
Q513	8-729-374-02	s	TRANSISTOR 2SB740
R1	1-215-485-00	s	RES, METAL 470K 1% 1/6W
R2	1-249-430-11	s	RES, CARBON 12K 5% 1/6W
R3	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R4	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R10	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R11	1-249-430-11	s	RES, CARBON 12K 5% 1/6W
R12	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R13	1-247-849-00	s	RES, CARBON 5.6K 5% 1/6W
R14	1-249-430-11	s	RES, CARBON 12K 5% 1/6W
R15	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R18	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R19	1-249-427-11	s	RES, CARBON 6.8K 5% 1/6W
R102	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R103	1-249-403-11	s	RES, CARBON 68 5% 1/4W
R104	1-249-434-11	s	RES, CARBON 27K 5% 1/6W
R105	1-249-407-11	s	RES, CARBON 150 5% 1/6W
R106	1-249-416-11	s	RES, CARBON 820K 5% 1/6W
R109	1-249-397-11	s	RES, CARBON 22 5% 1/6W
R110	1-249-397-11	s	RES, CARBON 22 5% 1/6W
R111	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R112	1-249-431-11	s	RES, CARBON 15K 5% 1/6W
R113	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R114	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R115	1-217-611-00	s	RES, METAL 0.1 10% 2W
R116	1-249-424-11	s	RES, CARBON 3.9K 5% 1/6W
R117	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R118	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R119	1-249-424-11	s	RES, CARBON 3.9K 5% 1/6W
R120	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R121	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R122	1-249-424-11	s	RES, CARBON 3.9K 5% 1/6W
R123	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R129	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R130	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R202	1-249-431-11	s	RES, CARBON 15K 5% 1/4W
R203	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R204	1-249-749-00	s	RES, CARBON 2.2M 5% 1/4W
R205	1-249-437-11	s	RES, CARBON 47K 5% 1/4W
R206	1-216-381-11	s	RES, METAL OXIDE 0.22 5% 3W
R207	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R208	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R212	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W
R213	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W
R214	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(MD-43 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R215	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R302	1-249-431-11	s	RES, CARBON 15K 5% 1/4W
R303	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R304	1-249-749-00	s	RES, CARBON 2.2M 5% 1/4W
R305	1-249-437-11	s	RES, CARBON 47K 5% 1/4W
R306	1-216-381-11	s	RES, METAL OXIDE 0.22 5% 3W
R307	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R308	1-247-731-11	s	RES, CARBON 22 5% 1/2W
R312	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W
R313	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W
R314	1-249-423-11	s	RES, CARBON 3.3K 5% 1/4W
R315	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R401	1-249-441-11	s	RES, CARBON 100K 5% 1/4W
R404	1-247-742-11	s	RES, CARBON 180 5% 1/2W
R405	1-249-421-11	s	RES, CARBON 2.2K 5% 1/4W
R406	1-249-387-11	s	RES, CARBON 3.3 5% 1/4W
R407	1-247-696-11	s	RES, CARBON 47 5% 1/4W
R501	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R502	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R503	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R504	1-249-433-11	s	RES, CARBON 22K 5% 1/4W
R505	1-249-433-11	s	RES, CARBON 22K 5% 1/4W
R506	1-249-425-11	s	RES, CARBON 4.7K 5% 1/4W
R507	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R508	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R509	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R512	1-247-739-11	s	RES, CARBON 100 5% 1/2W
R513	1-249-414-11	s	RES, CARBON 560 5% 1/4W
R514	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R515	1-249-421-11	s	RES, CARBON 2.2K 5% 1/4W
R516	1-249-428-11	s	RES, CARBON 8.2K 5% 1/4W
R517	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R518	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R519	1-249-421-11	s	RES, CARBON 2.2K 5% 1/4W
R520	1-249-428-11	s	RES, CARBON 8.2K 5% 1/4W
R521	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R524	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R525	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R528	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R529	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R530	1-216-381-11	s	RES, METAL OXIDE 0.22 5% 3W
R531	1-249-412-11	s	RES, CARBON 390 5% 1/4W
R532	1-249-397-11	s	RES, CARBON 22 5% 1/4W
R533	1-249-397-11	s	RES, CARBON 22 5% 1/4W
R534	1-249-441-11	s	RES, CARBON 100K 5% 1/4W
R535	1-249-441-11	s	RES, CARBON 100K 5% 1/4W
R536	1-249-420-11	s	RES, CARBON 1.8K 5% 1/4W
R901	1-249-416-11	s	RES, CARBON 820 5% 1/4W
R902	1-249-416-11	s	RES, CARBON 820 5% 1/4W
R903	1-249-416-11	s	RES, CARBON 820 5% 1/4W
R911	1-249-416-11	s	RES, CARBON 820 5% 1/4W
R912	1-249-416-11	s	RES, CARBON 820 5% 1/4W
R913	1-249-416-11	s	RES, CARBON 820 5% 1/4W
RB201	1-231-410-00	s	RESISTOR BLOCK 10K
RB301	1-231-410-00	s	RESISTOR BLOCK 10K

PC-34 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-895-11	o	PC BOARD, PC-34 WITHOUT COMPONENT
D1	8-719-918-74	s	DIODE GP-1S04

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

PC-36 BOARD, DVR-1000

The following components are included in the END SENSOR assy; A-6029-017-A.

Ref. No. or Qty	Part No.	SP	Description
D1	8-719-123-69	s	DIODE SE310
RV1	1-228-471-11	s	RES, VAR, CERMET 1K
Q1	8-729-116-45	s	TRANSISTOR PH110

PC-37 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-621-344-11	o	PC BOARD, PC-37 WITHOUT COMPONENT
PH1	8-719-915-46	s	DIODE GP-1S05

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

PD-36 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6023-043-A	o	COMPLETE PCB, PD-36

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
6pcs	7-682-648-09	s	SCREW +PSW 3X8
6pcs	7-684-023-04	s	N 3, TYPE 2
C1	1-161-494-00	s	CAP, CERAMIC 0.022uF 30% 25V
C3	1-161-494-00	s	CAP, CERAMIC 0.022uF 30% 25V
C5	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C6	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C7	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C8	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C9	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C10	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
CN930M	1-506-468-21	o	RECEP, 3P, MALE
CN931M	1-506-468-11	o	RECEP, 3P, MALE
D1	8-719-911-55	s	DIODE U05G
D2	8-719-911-55	s	DIODE U05G
D3	8-719-911-55	s	DIODE U05G
D4	8-719-911-55	s	DIODE U05G
IC1	8-759-205-76	s	IC TC504013BP
L1	1-421-370-00	s	COIL, CHOKE
Q1	8-729-901-41	s	TRANSISTOR 2SC1740S-R
Q2	8-729-901-41	s	TRANSISTOR 2SC1740S-R
Q3	8-729-901-41	s	TRANSISTOR 2SC1740S-R
Q4	8-729-173-36	s	TRANSISTOR 2SA773-Q
Q5	8-729-371-53	s	TRANSISTOR 2SA715
Q6	8-729-316-23	s	TRANSISTOR 2SC1162
Q7	8-729-901-41	s	TRANSISTOR 2SC1740S-R
Q8	8-729-173-36	s	TRANSISTOR 2SA773-Q
Q9	8-729-371-53	s	TRANSISTOR 2SA715
Q10	8-729-316-23	s	TRANSISTOR 2SC1162
R1	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R2	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R3	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R4	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R5	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R6	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R7	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R8	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R9	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R10	1-249-429-11	s	RES, CARBON 10K 5% 1/6W

PE-18 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-916-11	o	PC BOARD, PE-18 WITHOUT COMPONENT
CN206M	1-506-481-11	o	RECEP, 2P, MALE
D1	8-719-919-67	s	DIODE GL-9PG2

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

PR-87 BOARD, DVR-1000

The following components are included in the CN-A PANEL assy; A-6032-069-A.

Ref. No. or Qty	Part No.	SP	Description
2pcs	7-682-648-09	s	SCREW +PSW 3X8
C1	1-124-248-00	s	CAP, ELECT 22uF 20% 35V
C2	1-124-248-00	s	CAP, ELECT 22uF 20% 35V
C4	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
CN920M	1-506-477-11	o	RECEP, 12P, MALE
CN921M	1-506-480-21	o	RECEP, 15P, MALE
CN922M	1-506-480-11	o	RECEP, 15P, MALE
CN923M	1-506-471-11	o	CONNECTOR, 6P, MALE
CN924F	1-563-781-21	s	RECEP, D-SUB 50P, FEMALE
D1	8-719-100-54	s	DIODE RD9.1E-B2
D2	8-719-100-54	s	DIODE RD9.1E-B2
ICA1	8-759-990-82	s	IC TL082CP
ICA2	8-759-926-32	s	IC AM26LS32PC
ICB1	8-759-926-31	s	IC AM26LS31PC
ICB2	8-759-926-32	s	IC AM26LS32PC
R1	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R2	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R7	1-249-417-11	s	RES, CARBON 1K 5% 1/6W

PS-138 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6023-039-A	o	COMPLETE PCB, PS-138

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
1pc	4-873-829-02	o	HEAT SINK
2pcs	2-270-601-00	o	SUPPORT
1pc	7-682-653-09	s	SCREW +PSW 3X20
15pcs	2-832-007-00	s	BUSHING (K), INSULATING
43pcs	7-628-254-30	s	+PSW, 2.6X10
3pcs	4-875-726-00	s	SHEET, INSULATING
13pcs	7-682-648-09	s	SCREW +PSW 3X8
3pcs	7-628-254-20	s	+PSW, 2.6X8
2pcs	7-628-254-10	s	+PSW, 2.6X6
2pcs	1-533-037-XX	s	HOLDER, FUSE
C1	1-161-744-00	s	CAP, CERAMIC 0.01uF 400V
C2	1-161-744-00	s	CAP, CERAMIC 0.01uF 400V
C3	1-161-744-00	s	CAP, CERAMIC 0.01uF 400V
C4	1-161-744-00	s	CAP, CERAMIC 0.01uF 400V
C5	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C6	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C7	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C8	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C9	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C10	1-125-468-11	s	CAP, ELECT 1200uF 20% 200V
C11	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C12	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C13	1-161-742-00	s	CAP, CERAMIC 0.0022uF 20% 400V
C14	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C15	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C16	1-161-742-00	s	CAP, CERAMIC 0.0022uF 20% 400V
C17	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C18	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C19	1-161-742-00	s	CAP, CERAMIC 0.0022uF 20% 400V
C20	1-124-534-11	s	CAP, ELECT 680uF 20% 16V
C21	1-124-634-11	s	CAP, ELECT 1uF 20% 450V
C22	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C23	1-126-149-11	s	CAP, ELECT 3.3uF 20% 250V
C30	1-130-710-00	s	CAP, FILM 0.1uF 20% 250V
C102	1-124-491-11	s	CAP, ELECT 680uF 20% 25V
C103	1-124-491-11	s	CAP, ELECT 680uF 20% 25V
C104	1-126-148-11	s	CAP, ELECT 820uF 20% 63V
C105	1-126-148-11	s	CAP, ELECT 820uF 20% 63V
C106	1-161-898-11	s	CAP, CERAMIC 0.47uF 50V
C107	1-124-568-00	s	CAP, ELECT 4700uF 20% 10V
C108	1-124-568-00	s	CAP, ELECT 4700uF 20% 10V
C110	1-124-521-11	s	CAP, ELECT 6800uF 20% 10V
C111	1-124-521-11	s	CAP, ELECT 6800uF 20% 10V
C113	1-126-143-11	s	CAP, ELECT 470uF 20% 35V
C114	1-126-143-11	s	CAP, ELECT 470uF 20% 35V
C115	1-126-143-11	s	CAP, ELECT 470uF 20% 35V
C116	1-126-143-11	s	CAP, ELECT 470uF 20% 35V
C121	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C122	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C123	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C124	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C125	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C126	1-124-579-11	s	CAP, ELECT 1000uF 20% 16V
C127	1-124-599-00	s	CAP, ELECT 220uF 20% 25V
C128	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C129	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C130	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C131	1-124-599-00	s	CAP, ELECT 220uF 20% 25V
C134	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C135	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C136	1-126-146-11	s	CAP, ELECT 1000uF 20% 35V
C137	1-124-599-00	s	CAP, ELECT 220uF 20% 25V
C142	1-126-145-11	s	CAP, ELECT 680uF 20% 35V
C143	1-126-145-11	s	CAP, ELECT 680uF 20% 35V
C145	1-126-142-11	s	CAP, ELECT 100uF 20% 35V
C146	1-126-142-11	s	CAP, ELECT 100uF 20% 35V

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PS-138 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
CN103M	⚠ 1-560-752-00	o	RECEP, 9P, MALE
CN104M	1-560-309-00	o	RECEP, IL 3P, MALE
CN105M	1-506-621-11	o	RECEP, PS 12P, MALE
CN106M	1-506-617-11	o	RECEP, PS 4P, MALE
CN107M	1-506-620-11	o	RECEP, PS 10P, MALE
CN108M	1-506-621-11	o	RECEP, PS 12P, MALE
CN109M	1-560-309-00	o	RECEP, IL 3P, MALE
CN110F	1-509-985-00	o	HOUSING, IL 4P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN110M	⚠ 1-560-301-00	o	RECEP, IL 4P, MALE
CN111F	1-509-986-00	o	HOUSING, IL 5P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN111M	⚠ 1-560-302-00	o	RECEP, IL 5P, MALE
CN112F	1-509-988-00	o	HOUSING, IL 8P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN112M	⚠ 1-560-304-00	o	RECEP, IL 8P, MALE
CN113	1-560-883-11	o	RECEP, 7P, MALE
CN114M	1-560-883-11	o	RECEP, 7P, MALE
CN115M	1-560-883-11	o	RECEP, 7P, MALE
CN116M	1-560-883-11	o	RECEP, 7P, MALE
CN117M	1-560-883-11	o	RECEP, 7P, MALE
CN118M	1-560-883-11	o	RECEP, 7P, MALE
CN119F	1-509-988-00	o	HOUSING, IL 8P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN119M	1-560-304-00	o	RECEP, IL 8P, MALE
CN120F	1-509-988-00	o	HOUSING, IL 8P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN120M	1-560-304-00	o	RECEP, IL 8P, MALE
CN121F	1-509-985-00	o	HOUSING, IL 4P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN122F	1-509-986-00	o	HOUSING, IL 5P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN123F	1-509-988-00	o	HOUSING, IL 8P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN124M	1-561-087-00	o	HOUSING, 15P
	1-535-207-21	o	CONTACT, MALE AWG18-24
CP1	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP101	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP103	1-235-965-11	s	CR BLOCK, C=0.022 R=20
CP104	1-235-965-11	s	CR BLOCK, C=0.022 R=20
CP106	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP107	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP108	1-235-965-11	s	CR BLOCK, C=0.022 R=20
CP109	1-235-965-11	s	CR BLOCK, C=0.022 R=20
CP110	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP111	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP112	1-235-966-11	s	CR BLOCK, C=2200PF R=20
D1	8-719-200-02	s	DIODE 10E-2
D2	8-719-500-27	s	DIODE S15VB60
D3	8-719-200-02	s	DIODE 10E-2
D4	8-719-200-02	s	DIODE 10E-2
D5	8-719-100-90	s	DIODE RD24E-B2
D6	8-719-100-71	s	DIODE RD15E-B2
D7	8-719-100-77	s	DIODE RD18E-B2

(PS-138 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
D8	8-719-901-17	s	DIODE V11L
D9	1-806-660-11	s	DIODE ESAB85-009
D101	8-719-903-16	s	DIODE ESAC92-02
D102	8-719-500-71	s	DIODE D8LC40
D103	8-719-901-18	s	DIODE ESAD83-004
D104	8-719-901-18	s	DIODE ESADE83-004
D106	8-719-550-02	s	DIODE S5KC20R
D107	8-719-551-02	s	DIODE S5KC20R
D108	8-719-500-31	s	DIODE S10SC4MR
D109	8-719-500-31	s	DIODE S10SC4MR
D110	8-719-928-19	s	DIODE ESAC92-02
D111	8-719-928-19	s	DIODE ESAC92-02
D112	8-719-928-19	s	DIODE ESAC92-02
D113	8-719-907-25	s	DIODE ERA84-009
D114	8-719-100-86	s	DIODE RD22E-B2
D115	8-719-100-80	s	DIODE RD20E-B2
D116	8-719-908-06	s	DIODE ERA81-005
F1	⚠ 1-532-783-21	s	FUSE, MICRO 5A
F2	⚠ 1-532-783-21	s	FUSE, MICRO 5A
F3	⚠ 1-532-779-21	s	FUSE, MICRO 2A
F10	⚠ 1-532-496-00	s	FUSE, THERMAL 109°C 10A
F11	⚠ 1-532-826-11	s	FUSE, GLASS TUBE 2.5A
FB101	1-543-528-11	s	BEAD, AMORPHOUS
FB102	1-543-528-11	s	BEAD, AMORPHOUS
IC1	8-741-128-10	s	IC BX1281
IC2	8-741-128-10	s	IC BX1281
IC3	8-741-128-10	s	IC BX1281
IC4	8-741-128-10	s	IC BX1281
IC5	8-741-128-10	s	IC BX1281
IC6	8-741-128-10	s	IC BX1281
IC7	⚠ 8-719-902-56	s	IC PC817
IC103	8-759-700-24	s	IC NJM79M12A
IC104	8-759-170-12	s	IC uPC78M12H
IC105	8-759-170-12	s	IC uPC78M12H
L1	1-408-654-00	s	INDUCTOR, 1mH 5%
L101	1-421-936-11	s	COIL, CHOKE 400uH
L102	1-421-936-11	s	COIL, CHOKE 400uH
L103	1-421-937-11	s	COIL, CHOKE 100uH
L104	1-421-937-11	s	COIL, CHOKE 100uH
L106	1-408-299-00	s	COIL, CHOKE 20mH
L107	1-408-299-00	s	COIL, CHOKE 20mH
L109	1-413-091-00	s	COIL, SN
L110	1-421-459-00	s	COIL, CHOKE
L111	1-413-091-00	s	COIL, SN
L112	1-421-459-00	s	COIL, CHOKE
L113	1-413-091-00	s	COIL, SN
L114	1-421-459-00	s	COIL, CHOKE
L115	1-413-091-00	s	COIL, SN
L116	1-421-459-00	s	COIL, CHOKE
L117	1-413-091-00	s	COIL, SN
L118	1-421-459-00	s	COIL, CHOKE
L119	1-413-091-00	s	COIL, SN
L120	1-421-459-00	s	COIL, CHOKE
L121	1-459-106-00	s	COIL, DUST CORE
L122	1-421-329-00	s	COIL, CHOKE
L123	1-421-329-00	s	COIL, CHOKE
Q1	8-729-208-29	s	TRANSISTOR 2SK385
Q2	8-729-208-29	s	TRANSISTOR 2SK385
Q3	8-729-208-29	s	TRANSISTOR 2SK385
Q4	8-729-208-29	s	TRANSISTOR 2SK385
Q5	8-729-208-29	s	TRANSISTOR 2SK385
Q6	8-729-208-29	s	TRANSISTOR 2SK385
Q7	8-729-307-58	s	TRANSISTOR 2SC1775A
Q8	8-729-208-28	s	TRANSISTOR 2SK528
Q101	8-729-904-38	s	TRANSISTOR 2SD1118
Q102	8-729-984-70	s	TRANSISTOR 2SD847
Q103	8-729-984-70	s	TRANSISTOR 2SD847
Q104	8-729-984-70	s	TRANSISTOR 2SD847
Q105	8-729-984-70	s	TRANSISTOR 2SD847
Q106	8-729-900-07	s	TRANSISTOR 2SB757-B
R1	⚠ 1-205-902-21	s	RES, CEMENT 12 5% 20W
R4	1-205-903-11	s	RES, CEMENT 24K 5% 5W
R5	1-205-903-11	s	RES, CEMENT 24K 5% 5W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PS-138 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R8	⚠ 1-207-637-00	s	RES, WIREWOUND 150 10% 3W
R9	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R12	⚠ 1-207-637-00	s	RES, WIREWOUND 150 10% 3W
R15	⚠ 1-207-637-00	s	RES, WIREWOUND 150 10% 3W
R16	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R17	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R18	1-247-749-11	s	RES, CARBON 560 5% 1/2W
R19	1-215-904-11	s	RES, METAL 100K 5% 2W
R20	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R21	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R22	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R23	⚠ 1-217-699-11	s	RES, FUSE 750 5% 2W
R24	⚠ 1-217-699-11	s	RES, FUSE 750 5% 2W
R101	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R102	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R103	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R104	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R107	1-249-397-11	s	RES, CARBON 22 5% 1/6W
R108	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R109	1-249-416-11	s	RES, CARBON 820 5% 1/6W
R110	1-249-419-11	s	RES, CARBON 1.5K 5% 1/6W
R111	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R112	1-216-771-11	s	RES, METAL 82 5% 10W
R113	1-216-772-11	s	RES, METAL 390 5% 10W
R114	1-216-770-11	s	RES, METAL 33 5% 10W
R115	1-216-770-11	s	RES, METAL 33 5% 10W
R116	1-216-769-11	s	RES, METAL 10 5% 10W
R123	1-207-612-00	s	RES, WIREWOUND 0.1 10% 3W
R124	1-207-612-00	s	RES, WIREWOUND 0.1 10% 3W
R125	1-207-612-00	s	RES, WIREWOUND 0.1 10% 3W
R126	1-249-409-11	s	RES, CARBON 220 5% 1/6W
R127	1-207-612-00	s	RES, WIREWOUND 0.1 10% 3W
R128	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R129	1-207-612-00	s	RES, WIREWOUND 0.1 10% 3W
R130	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
RY1	⚠ 1-515-493-00	s	RELAY
S1	⚠ 1-570-258-41	s	SWITCH, THERMAL 80°C
T1	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T2	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T3	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T4	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T5	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T6	⚠ 1-437-190-11	s	TRANSFORMER, DRIVE
T7	⚠ 1-448-791-12	s	TRANSFORMER, CONVERTER
T8	⚠ 1-448-789-11	s	TRANSFORMER, CONVERTER
T9	⚠ 1-448-790-11	s	TRANSFORMER, CONVERTER
T10	⚠ 1-448-792-11	s	TRANSFORMER, CONVERTER
VDR1	1-806-356-00	s	VARISTOR ENB461-10A

PS-139 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6017-142-A	o	COMPLETE PCB, PS-139
(This assembly includes the following parts.)			
1pc	3-674-390-00	o	HOLDER (B), LED
2pcs	2-832-007-00	s	BUSHING (K), INSULATING
2pcs	7-628-254-30	s	+PSW, 2.6X10
2pcs	7-622-207-05	s	N 2.6, TYPE 2
C1	1-161-055-00	s	CAP, CERAMIC 0.022uF 10% 50V
C2	1-126-144-11	s	CAP, ELECT 330uF 20% 35V
C3	1-161-055-00	s	CAP, CERAMIC 0.022uF 10% 50V
C4	1-161-055-00	s	CAP, CERAMIC 0.022uF 10% 50V
C5	1-162-814-11	s	CAP, CERAMIC 0.47uF 10% 50V
C6	1-136-157-00	s	CAP, MYLAR 0.022uF 10% 50V
C7	1-136-157-00	s	CAP, MYLAR 0.022uF 10% 50V
C8	1-131-347-00	s	CAP, TANT 1uF 10% 35V
C10	1-126-140-11	s	CAP, ELECT 470uF 20% 25V
C11	1-162-814-11	s	CAP, CERAMIC 0.47uF 10% 50V
C12	1-124-559-51	s	CAP, ELECT 1000uF 20% 10V
C13	1-136-157-00	s	CAP, MYLAR 0.022uF 10% 50V
C14	1-131-347-00	s	CAP, TANT 1uF 10% 35V
C15	1-136-157-00	s	CAP, MYLAR 0.022uF 10% 50V
C16	1-124-489-11	s	CAP, ELECT 150uF 20% 25V
C17	1-161-055-00	s	CAP, CERAMIC 0.022uF 10% 50V
C18	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
CN509M	1-566-402-11	o	RECEP, 24P, MALE
CN510F	1-563-769-11	s	RECEP, ROUND 8P, FEMALE
CP1	1-235-966-11	s	CR BLOCK, C=2200PF R=20
CP2	1-235-966-11	s	CR BLOCK, C=2200PF R=20
D1	8-719-116-07	s	DIODE RD16E-B
D2	8-719-113-07	s	DIODE RD13E-B
D3	8-719-907-30	s	DIODE ERB84-009
D4	8-719-903-06	s	DIODE ERC84-009
D5	8-719-918-88	s	DIODE 1SS198
D6	8-719-918-88	s	DIODE 1SS198
D7	8-719-918-88	s	DIODE 1SS198
D8	8-719-918-88	s	DIODE 1SS198
D9	8-719-918-88	s	DIODE 1SS198
D10	8-719-918-88	s	DIODE 1SS198
D11	8-719-918-88	s	DIODE 1SS198
D12	8-719-918-88	s	DIODE 1SS198
D13	8-719-918-88	s	DIODE 1SS198
D14	8-719-918-88	s	DIODE 1SS198
D15	8-719-918-88	s	DIODE 1SS198
D16	8-719-918-88	s	DIODE 1SS198
D17	8-719-918-88	s	DIODE 1SS198
D18	8-719-918-88	s	DIODE 1SS198
D19	8-719-918-88	s	DIODE 1SS198
D20	8-719-905-54	s	DIODE EBG5504S
IC1	8-741-128-10	s	IC BX1281
IC2	8-759-937-59	s	IC MB3759
IC3	8-759-937-59	s	IC MB3759
IC4	8-741-128-10	s	IC BX1281
L1	1-421-329-00	s	COIL, CHOKE
L2	1-413-089-00	s	COIL, SN
L3	1-413-090-21	s	COIL, SN
L4	1-421-329-00	s	COIL, CHOKE
Q1	8-729-304-35	s	TRANSISTOR 2SJ122
Q2	8-729-304-35	s	TRANSISTOR 2SJ122
Q3	8-729-900-33	s	TRANSISTOR DTC144EF
Q4	8-729-900-33	s	TRANSISTOR DTC144EF
R1	1-249-416-11	s	RES, CARBON 820 5% 1/6W
R2	1-249-416-11	s	RES, CARBON 820 5% 1/6W
R3	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R4	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R5	1-247-849-00	s	RES, CARBON 5.6K 5% 1/6W
R6	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R7	1-249-438-11	s	RES, CARBON 56K 5% 1/6W
R8	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R9	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R10	1-249-409-11	s	RES, CARBON 220 5% 1/6W
R11	1-249-409-11	s	RES, CARBON 220 5% 1/6W
R13	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R14	1-249-414-11	s	RES, CARBON 560 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PS-139 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R17	1−249−433−11	s	RES, CARBON 22K 5% 1/6W
R18	1−207−612−00	s	RES, WIREWOUND 0.1 10% 3W
R19	1−249−416−11	s	RES, CARBON 820 5% 1/6W
R22	1−247−885−00	s	RES, CARBON 180K 5% 1/6W
R24	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R25	1−249−428−11	s	RES, CARBON 8.2K 5% 1/6W
R26	1−217−212−00	s	RES, WIREWOUND 10 10% 2W
R27	1−207−612−00	s	RES, WIREWOUND 0.1 10% 3W
R28	1−249−437−11	s	RES, CARBON 47K 5% 1/6W
R29	1−249−435−11	s	RES, CARBON 33K 5% 1/6W
R30	1−249−416−11	s	RES, CARBON 820 5% 1/6W
R31	1−249−414−11	s	RES, CARBON 560 5% 1/6W
R32	1−249−437−11	s	RES, CARBON 47K 5% 1/6W
R33	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R34	1−249−411−11	s	RES, CARBON 330 5% 1/6W
R35	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R36	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R37	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
RV1	1−230−843−11	s	RES, VAR, METAL 10K
RV2	1−230−842−11	s	RES, VAR, METAL 5K
RV3	1−230−843−11	s	RES, VAR, METAL 10K
RV4	1−230−845−11	s	RES, VAR, METAL 50K
S13	1−554−041−11	s	SWITCH WITH LED, PUSH
S14	1−554−041−11	s	SWITCH WITH LED, PUSH
S15	1−554−041−11	s	SWITCH WITH LED, PUSH

RE-32 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A−6023−040−A	o	COMPLETE PCB, RE−32
(This assembly includes the following parts.)			
C4	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C8	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C14	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C17	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C18	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C20	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C21	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
C22	1−130−477−00	s	CAP, MYLAR 0.0033uF 5% 50V
C23	1−130−494−11	s	CAP, MYLAR 0.082uF 5% 50V
C24	1−162−810−11	s	CAP, CERAMIC 0.22uF 10% 50V
C26	1−130−475−00	s	CAP, MYLAR 0.0022uF 5% 50V
C28	1−130−489−00	s	CAP, MYLAR 0.033uF 5% 50V
C30	1−131−353−00	s	CAP, TANT 10uF 10% 35V
C33	1−130−471−00	s	CAP, MYLAR 0.001uF 5% 50V
C35	1−131−349−00	s	CAP, TANT 2.2uF 10% 35V
C38	1−131−353−00	s	CAP, TANT 10uF 10% 35V
C40	1−130−497−00	s	CAP, MYLAR 0.15uF 5% 50V
C41	1−130−475−00	s	CAP, MYLAR 0.0022uF 5% 50V
C101	1−162−812−11	s	CAP, CERAMIC 0.33uF 10% 50V
CN113F	1−561−975−11	o	RECEP, 7P, FEMALE
CN114F	1−561−975−11	o	RECEP, 7P, FEMALE
CN115F	1−561−975−11	o	RECEP, 7P, FEMALE
CN116F	1−561−975−11	o	RECEP, 7P, FEMALE
CN117F	1−561−975−11	o	RECEP, 7P, FEMALE
CN118F	1−561−975−11	o	RECEP, 7P, FEMALE
D1	8−719−911−19	s	DIODE 1SS119
D2	8−719−911−19	s	DIODE 1SS119
D3	8−719−100−21	s	DIODE RD3.9E−B2
D4	8−719−911−19	s	DIODE 1SS119
D5	8−719−911−19	s	DIODE 1SS119
D6	8−719−100−21	s	DIODE RD3.9E−B2
D7	8−719−911−19	s	DIODE 1SS119
D8	8−719−911−19	s	DIODE 1SS119
D9	8−719−100−21	s	DIODE RD3.9E−B2
D10	8−719−102−51	s	DIODE 1SZ51
D11	8−719−102−51	s	DIODE 1SZ51
D13	8−719−911−19	s	DIODE 1SS119
D14	8−719−100−54	s	DIODE RD9.1E−B2
IC1	8−759−708−05	s	IC NJM78L05A
IC2	8−759−135−80	s	IC uPC358C
IC3	8−759−990−84	s	IC TL084CN
IC4	8−719−919−78	s	IC PC−627
IC5	8−759−133−90	s	IC uPC339C
IC6	8−759−937−59	s	IC MB3759
IC7	8−759−240−49	s	IC TC4049BP
IC8	8−759−040−11	s	IC MC14011BCP
IC9	8−759−040−01	s	IC MC14001BCP
IC10	8−759−045−38	s	IC MC14538BCP
IC11	8−759−937−59	s	IC MB3759
L1	1−421−329−00	s	COIL, CHOKE
L2	1−421−329−00	s	COIL, CHOKE
Q1	8−729−169−02	s	TRANSISTOR 2SC2690A
Q2	8−729−122−02	s	TRANSISTOR 2SA1220A
Q3	8−729−122−02	s	TRANSISTOR 2SA1220A
Q4	8−729−122−02	s	TRANSISTOR 2SA1220A
Q5	8−729−900−65	s	TRANSISTOR DTA144ES
Q6	8−729−105−72	s	TRANSISTOR 2SK523−L1
Q7	8−729−105−72	s	TRANSISTOR 2SK523−L1
Q8	8−729−900−65	s	TRANSISTOR DTA144ES
Q9	8−729−900−85	s	TRANSISTOR DTC144WS
Q10	8−729−900−65	s	TRANSISTOR DTA144ES
Q11	8−729−113−33	s	TRANSISTOR 2SB733−4
R1	1−249−401−11	s	RES, CARBON 47 5% 1/6W
R2	1−249−397−11	s	RES, CARBON 22 5% 1/6W
R3	1−249−423−11	s	RES, CARBON 3.3K 5% 1/6W
R4	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R5	1−249−415−11	s	RES, CARBON 680 5% 1/6W
R9	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R10	1−247−885−00	s	RES, CARBON 180K 5% 1/6W
R11	1−249−421−11	s	RES, CARBON 2.2K 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(RE-32 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R12	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R14	1−249−421−11	s	RES, CARBON 2.2K 5% 1/6W
R15	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R16	1−249−401−11	s	RES, CARBON 47 5% 1/6W
R17	1−249−397−11	s	RES, CARBON 22 5% 1/6W
R18	1−249−423−11	s	RES, CARBON 3.3K 5% 1/6W
R19	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R20	1−249−415−11	s	RES, CARBON 680 5% 1/6W
R24	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R25	1−247−885−00	s	RES, CARBON 180K 5% 1/6W
R26	1−249−421−11	s	RES, CARBON 2.2K 5% 1/6W
R27	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R29	1−249−421−11	s	RES, CARBON 2.2K 5% 1/6W
R30	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R31	1−249−387−11	s	RES, CARBON 3.3 5% 1/6W
R32	1−249−387−11	s	RES, CARBON 3.3 5% 1/6W
R33	1−249−393−11	s	RES, CARBON 10 5% 1/6W
R34	1−249−423−11	s	RES, CARBON 3.3K 5% 1/6W
R35	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R36	1−249−415−11	s	RES, CARBON 680 5% 1/6W
R37	1−247−849−00	s	RES, CARBON 5.6K 5% 1/6W
R40	1−249−420−11	s	RES, CARBON 1.8K 5% 1/6W
R41	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R42	1−249−405−11	s	RES, CARBON 100 5% 1/6W
R44	1−249−405−11	s	RES, CARBON 100 5% 1/6W
R45	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R46	1−249−403−11	s	RES, CARBON 68 5% 1/6W
R47	1−249−415−11	s	RES, CARBON 680 5% 1/6W
R48	1−249−415−11	s	RES, CARBON 680 5% 1/6W
R49	1−249−432−11	s	RES, CARBON 18K 5% 1/6W
R50	1−249−430−11	s	RES, CARBON 12K 5% 1/4W
R51	1−247−849−00	s	RES, CARBON 5.6K 5% 1/6W
R52	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R53	1−249−424−11	s	RES, CARBON 3.9K 5% 1/6W
R54	1−249−433−11	s	RES, CARBON 22K 5% 1/6W
R55	1−215−421−00	s	RES, METAL 1K 1% 1/6W
R56	1−249−429−11	s	RES, CARBON 10K 5% 1/6W
R57	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R58	1−249−438−11	s	RES, CARBON 56K 5% 1/6W
R59	1−249−433−11	s	RES, CARBON 22K 5% 1/6W
R60	1−249−437−11	s	RES, CARBON 47K 5% 1/6W
R62	1−249−435−11	s	RES, CARBON 33K 5% 1/6W
R63	1−249−435−11	s	RES, CARBON 33K 5% 1/6W
R64	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R66	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R67	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R68	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R69	1−249−409−11	s	RES, CARBON 220 5% 1/6W
R70	1−249−431−11	s	RES, CARBON 15K 5% 1/6W
R72	1−249−435−11	s	RES, CARBON 33K 5% 1/6W
R73	1−249−410−11	s	RES, CARBON 270 5% 1/6W
R74	1−249−425−11	s	RES, CARBON 4.7K 5% 1/6W
R75	1−247−849−00	s	RES, CARBON 5.6K 5% 1/6W
R76	1−249−397−11	s	RES, CARBON 22 5% 1/6W
R77	1−249−405−11	s	RES, CARBON 100 5% 1/6W
R79	1−249−441−11	s	RES, CARBON 100K 5% 1/6W
R80	1−249−431−11	s	RES, CARBON 15K 5% 1/6W
R81	1−247−885−00	s	RES, CARBON 180K 5% 1/6W
R82	1−249−428−11	s	RES, CARBON 8.2K 5% 1/6W
R83	1−249−419−11	s	RES, CARBON 1.5K 5% 1/6W
R84	1−249−423−11	s	RES, CARBON 3.3K 5% 1/6W
R85	1−249−431−11	s	RES, CARBON 15K 5% 1/6W
R86	1−249−441−11	s	RES, CARBON 100K 5% 1/6W
R87	1−249−431−11	s	RES, CARBON 15K 5% 1/6W
R88	1−215−435−00	s	RES, METAL 3.9K 1% 1/6W
RV1	1−230−842−11	s	RES, VAR, METAL 5K
RV2	1−230−840−11	s	RES, VAR, METAL 1K
RV3	1−230−842−11	s	RES, VAR, METAL 5K
RV4	1−230−840−11	s	RES, VAR, METAL 1K
RV5	1−230−842−11	s	RES, VAR, METAL 5K
RV6	1−230−838−11	s	RES, VAR, METAL 200
RV7	1−230−843−11	s	RES, VAR, METAL 10K
RV8	1−230−846−11	s	RES, VAR, METAL 100K
RV9	1−230−842−11	s	RES, VAR, METAL 5K
RV10	1−230−845−11	s	RES, VAR, METAL 50K

RE-44 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A−6017−147−A	o	COMPLETE PCB, RE−44

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
C1	1−163−038−00	s	CAP, CHIP, CERAMIC 0.1 50V
C2	1−163−001−00	s	CAP, CHIP, CERAMIC 220PF 10% 50V
C3	1−163−001−00	s	CAP, CHIP, CERAMIC 220PF 10% 50V
CN505F	1−562−149−11	o	HOUSING, 4P
	1−563−088−11	o	CONTACT, FEMALE AWG 24−30
IC1	8−759−100−93	s	IC UPC393G2
PH1	1−464−779−21	s	ENCODER, ROTARY
R1	1−216−065−00	s	RES, CHIP, METAL 4.7K 5% 1/10W
R2	1−216−073−00	s	RES, CHIP, METAL 10K 5% 1/10W
R3	1−216−103−00	s	RES, CHIP, METAL 180K 5% 1/10W
R4	1−216−065−00	s	RES, CHIP, METAL 4.7K 5% 1/10W
R5	1−216−103−00	s	RES, CHIP, METAL 180K 5% 1/10W
R6	1−216−065−00	s	RES, CHIP, METAL 4.7K 5% 1/10W
R7	1−216−073−00	s	RES, CHIP, METAL 10K 5% 1/10W
R8	1−216−065−00	s	RES, CHIP, METAL 4.7K 5% 1/10W
RV1	1−228−474−00	s	RES, VAR, CERMET 10K
RV2	1−228−474−00	s	RES, VAR, CERMET 10K

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

RF-15 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6011-114-B	o	COMPLETE PCB, RF-15

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
1pc	3-715-590-01	o	LABEL, SERIAL NUMBER
2pcs	3-673-249-00	o	LEVER, PC BOARD
2pcs	7-626-320-11	o	PIN, SPRING 3X8
4pcs	7-628-254-30	s	+PSW, 2.6X10
2pcs	7-622-207-05	s	N 2.6, TYPE 2
2pcs	7-622-207-05	s	N 2.6, TYPE 2
4pcs	7-682-647-09	s	SCREW +PWH 3X6
C9	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C10	1-131-365-00	s	CAP, TANT 10uF 20% 20
C11	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C12	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C13	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C26	1-109-807-00	s	CAP, MICA 100PF 1% 100V
C27	1-109-807-00	s	CAP, MICA 100PF 1% 100V
C28	1-109-807-00	s	CAP, MICA 100PF 1% 100V
C29	1-109-807-00	s	CAP, MICA 100PF 1% 100V
C81	1-130-483-00	s	CAP, MYLAR 0.01uF 5% 50V
C82	1-102-110-00	s	CAP, CERAMIC 220PF 10% 50V
CN705M	1-506-748-11	s	RECEP, DIN 96P, MALE
CN706M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN740M	1-506-480-21	o	RECEP, 15P, MALE
CN741M	1-506-477-11	o	RECEP, 12P, MALE
CN742M	1-506-477-21	o	RECEP, 12P, MALE
CN743M	1-506-477-11	o	RECEP, 12P, MALE
CN744M	1-506-468-11	o	RECEP, 3P, MALE
CN745M	1-561-310-00	s	RECEP, RF, MALE
CN746M	1-561-310-00	s	RECEP, RF, MALE
CN747M	1-561-310-00	s	RECEP, RF, MALE
CN748M	1-561-310-00	s	RECEP, RF, MALE
D1	8-719-400-35	s	DIODE LN35BP
D2	8-719-815-55	s	DIODE 1S1555
D3	8-719-815-55	s	DIODE 1S1555
D4	8-719-815-55	s	DIODE 1S1555
D5	8-719-815-55	s	DIODE 1S1555
D6	8-719-815-55	s	DIODE 1S1555
D7	8-719-815-55	s	DIODE 1S1555
D8	8-719-815-55	s	DIODE 1S1555
D9	8-719-815-55	s	DIODE 1S1555
D10	8-719-815-55	s	DIODE 1S1555
D11	8-719-815-55	s	DIODE 1S1555
D12	8-719-815-55	s	DIODE 1S1555
D13	8-719-815-55	s	DIODE 1S1555
D14	8-719-815-55	s	DIODE 1S1555
D15	8-719-815-55	s	DIODE 1S1555
D16	8-719-815-55	s	DIODE 1S1555
FB1	1-535-178-00	s	FERRITE BEAD
FB2	1-535-178-00	s	FERRITE BEAD
FB3	1-535-178-00	s	FERRITE BEAD
FB4	1-535-178-00	s	FERRITE BEAD
FB5	1-535-178-00	s	FERRITE BEAD
FB6	1-535-178-00	s	FERRITE BEAD
FB7	1-535-178-00	s	FERRITE BEAD
FB8	1-535-178-00	s	FERRITE BEAD
IC1	PENDING	s	IC CXA1192
IC2	PENDING	s	IC CXA1192
IC3	PENDING	s	IC CXA1192
IC4	PENDING	s	IC CXA1192
IC5	PENDING	s	IC CXA1193
IC6	PENDING	s	IC CXA1193
IC7	PENDING	s	IC CXA1193
IC8	PENDING	s	IC CXA1193
IC9	8-759-203-08	s	IC TC74HC221P
IC10	8-759-203-08	s	IC TC74HC221P
IC11	8-759-202-11	s	IC TC74HC00P
IC12	8-759-990-84	s	IC TL084CN
IC13	8-759-916-29	s	IC SN74HC74N
IC14	8-759-301-24	s	IC HD10124
IC15	8-759-301-24	s	IC HD10124
IC16	8-759-007-20	s	IC MC74HC4052N
IC17	8-759-007-20	s	IC MC74HC4052N

(RF-15 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
JP1	1-566-385-11	s	PIN, SHORT
JP2	1-566-385-11	s	PIN, SHORT
JS2	1-565-413-11	s	RECEPTACLE CONNECTOR 2P
L1	1-421-370-00	s	COIL, CHOKE
L2	1-421-370-00	s	COIL, CHOKE
L3	1-410-312-11	s	INDUCTOR, 0.22uH
L4	1-410-312-11	s	INDUCTOR, 0.22uH
LV1	1-410-745-11	s	INDUCTOR, VAR 0.79uH
LV2	1-410-745-11	s	INDUCTOR, VAR 0.79uH
LV3	1-410-745-11	s	INDUCTOR, VAR 0.79uH
LV4	1-410-745-11	s	INDUCTOR, VAR 0.79uH
Q1	8-729-606-32	s	TRANSISTOR 2SC2603-E
Q2	8-729-173-38	s	TRANSISTOR 2SA733-K
Q3	8-729-173-38	s	TRANSISTOR 2SA733-K
Q4	8-729-173-38	s	TRANSISTOR 2SA733-K
Q5	8-729-173-38	s	TRANSISTOR 2SA733-K
R51	1-215-401-11	s	RES, METAL 150 1% 1/6W
R52	1-215-401-11	s	RES, METAL 150 1% 1/6W
R53	1-215-401-11	s	RES, METAL 150 1% 1/6W
R54	1-215-401-11	s	RES, METAL 150 1% 1/6W
R55	1-215-401-11	s	RES, METAL 150 1% 1/6W
R56	1-215-401-11	s	RES, METAL 150 1% 1/6W
R57	1-215-401-11	s	RES, METAL 150 1% 1/6W
R58	1-215-401-11	s	RES, METAL 150 1% 1/6W
R104	1-215-401-11	s	RES, METAL 150 1% 1/6W
R105	1-215-401-11	s	RES, METAL 150 1% 1/6W
R106	1-215-401-11	s	RES, METAL 150 1% 1/6W
R107	1-215-401-11	s	RES, METAL 150 1% 1/6W
RB1	1-231-533-00	s	RESISTOR BLOCK, 10KX4
RB2	1-231-502-00	s	RESISTOR BLOCK, 510X4
RB3	1-231-502-00	s	RESISTOR BLOCK, 510X4
RV1	1-224-940-00	s	RES, VAR, METAL 10K
RV2	1-224-940-00	s	RES, VAR, METAL 10K
RV3	1-224-942-00	s	RES, VAR, METAL 50K
RV4	1-224-942-00	s	RES, VAR, METAL 50K
RV5	1-224-942-00	s	RES, VAR, METAL 50K
RV6	1-224-942-00	s	RES, VAR, METAL 50K
RV7	1-224-924-11	s	RES, VAR, METAL 500
RV8	1-224-924-11	s	RES, VAR, METAL 500
RV9	1-224-924-11	s	RES, VAR, METAL 500
RV10	1-224-924-11	s	RES, VAR, METAL 500
RV11	1-224-942-00	s	RES, VAR, METAL 50K
RV12	1-224-942-00	s	RES, VAR, METAL 50K
RV13	1-224-942-00	s	RES, VAR, METAL 50K
RV14	1-224-942-00	s	RES, VAR, METAL 50K

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

RS-23 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6015-105-B	o	COMPLETE PCB, RS-23
(This assembly includes the following parts.)			
2pcs	3-673-249-00	o	LEVER, PC BOARD
2pcs	7-626-320-11	o	PIN, SPRING 3X8
1pc	3-715-590-31	o	LABEL, SERIAL NUMBER
4pcs	7-628-254-30	s	+PSW, 2.6X10
4pcs	7-622-207-05	s	N 2.6, TYPE 2
4pcs	7-682-647-09	s	SCREW +PWH 3X6
C3	1-162-288-31	s	CAP, CERAMIC 330PF 10% 50V
C4	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C5	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C6	1-123-611-00	s	CAP, ELECT 1uF 20% 50V
C7	1-123-611-00	s	CAP, ELECT 1uF 20% 50V
C8	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C9	1-130-491-00	s	CAP, MYLAR 0.047uF 5% 50V
C10	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C11	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C12	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C13	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C14	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C15	1-161-379-00	s	CAP, CERAMIC 0.01uF 20% 25V
C17	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C19	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C26	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C27	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C29	1-124-259-00	s	CAP, ELECT 4.7uF 20% 50V
C30	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C37	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C38	1-130-471-00	s	CAP, MYLAR 0.001uF 5% 50V
C39	1-130-477-00	s	CAP, MYLAR 0.0033uF 5% 50V
C40	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C41	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C42	1-162-287-31	s	CAP, CERAMIC 270PF 10% 50V
C43	1-130-484-00	s	CAP, MYLAR 0.012uF 5% 50V
C48	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C53	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C55	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C56	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C57	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C59	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C60	1-162-287-31	s	CAP, CERAMIC 270PF 10% 50V
C61	1-124-236-00	s	CAP, ELECT 47uF 20% 16V
C62	1-130-484-00	s	CAP, MYLAR 0.012uF 5% 50V
C63	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C64	1-123-611-00	s	CAP, ELECT 1uF 20% 50V
C65	1-123-611-00	s	CAP, ELECT 1uF 20% 50V
C77	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C80	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C81	1-124-598-11	s	CAP, ELECT 22uF 20% 25V
C82	1-124-002-11	s	CAP, ELECT, NONPOLAR, 1uF 20% 50V
C83	1-162-814-11	s	CAP, CERAMIC 0.47uF 10% 50V
C84	1-162-814-11	s	CAP, CERAMIC 0.47uF 10% 50V
C85	1-161-375-00	s	CAP, CERAMIC 0.0022uF 20% 50V
C86	1-161-375-00	s	CAP, CERAMIC 0.0022uF 20% 50V
C87	1-161-375-00	s	CAP, CERAMIC 0.0022uF 20% 50V
C88	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C89	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C90	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C91	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C92	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C93	1-161-379-00	s	CAP, CERAMIC 0.01uF 20% 25V
CN1M	1-560-313-00	o	RECEP, IL 8P, MALE
CN720M	1-506-748-11	s	RECEP, DIN 96P, MALE
CN721M	1-506-746-11	s	RECEP, DIN 48P, MALE
D1	8-719-911-06	s	DIODE 1SS106
D2	8-719-911-06	s	DIODE 1SS106
D3	8-719-101-98	s	DIODE 1SS97
D4	8-719-101-98	s	DIODE 1SS97
D5	8-719-101-98	s	DIODE 1SS97
D6	8-719-101-98	s	DIODE 1SS97
D7	1-807-200-11	s	DIODE S5277B
D8	8-719-933-30	s	DIODE DA210S
D9	8-719-933-30	s	DIODE DA210S
D10	8-719-933-30	s	DIODE DA210S

(RS-23 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
FB1	1-535-178-00	s	FERRITE BEAD
ICA1	8-759-990-82	s	IC TL082CP
ICA2	8-759-000-47	s	IC MC14051BCP
ICA3	8-759-000-47	s	IC MC14051BCP
ICA4	8-759-000-47	s	IC MC14051BCP
ICA5	8-759-000-47	s	IC MC14051BCP
ICA6	8-759-000-47	s	IC MC14051BCP
ICA7	8-759-135-80	s	IC uPC358C
ICA8	8-759-990-82	s	IC TL082CP
ICA9	8-759-103-95	s	IC uPC648C
ICA11	8-759-917-05	s	IC SN74HC541N
ICA12	8-759-107-52	s	IC CXQ71054P
ICA14	8-759-112-54	s	IC uPD78C10G-36
ICA17	8-759-741-10	s	IC MBM27C32A-RS230120
ICA19	8-759-916-94	s	IC SN74HC373N
ICB1	8-759-990-82	s	IC TL082CP
ICB2	8-759-103-93	s	IC uPC393C
ICB3	8-759-135-80	s	IC uPC358C
ICB4	8-759-135-80	s	IC uPC358C
ICB5	8-759-135-80	s	IC uPC358C
ICB6	8-759-135-80	s	IC uPC358C
ICB7	8-759-000-47	s	IC MC14051BCP
ICC5	8-759-240-53	s	IC TC4053BP
ICC6	8-759-135-80	s	IC uPC358C
ICC11	8-759-302-76	s	IC HM6116ALSP-15
ICC17	8-759-921-34	s	IC SN74HC245N
ICC18	8-759-203-36	s	IC TC74HC374P
ICD1	8-759-990-82	s	IC TL082CP
ICD2	8-759-135-80	s	IC uPC358C
ICD3	8-759-103-93	s	IC uPC393C
ICD4	8-759-135-80	s	IC uPC358C
ICD6	8-759-990-82	s	IC TL082CP
ICD7	8-759-990-82	s	IC TL082CP
ICD8	8-759-202-74	s	IC TC74HC04P
ICD9	8-759-203-68	s	IC TC74HC4040P
ICD10	8-759-202-74	s	IC TC74HC04P
ICD12	8-759-916-29	s	IC SN74HC74N
ICD13	8-759-910-43	s	IC CX23028
ICE1	8-759-990-82	s	IC TL082CP
ICE2	8-759-202-74	s	IC TC74HC04P
ICE3	8-759-103-93	s	IC uPC393C
ICE4	8-759-135-80	s	IC uPC358C
ICE5	8-759-240-52	s	IC TC4052BP
ICE6	8-759-990-82	s	IC TL082CP
ICE7	8-759-990-82	s	IC TL082CP
ICE8	8-759-921-34	s	IC SN74HC245N
ICE9	8-759-916-50	s	IC SN74HC157N
ICE10	8-759-916-50	s	IC SN74HC157N
ICE11	8-759-916-50	s	IC SN74HC157N
ICE12	8-759-202-21	s	IC TC74HC32P
ICE13	8-759-202-11	s	IC TC74HC00P
ICE14	8-759-803-70	s	IC LC74HC08
ICE15	8-759-202-21	s	IC TC74HC32P
ICE16	8-759-917-05	s	IC SN74HC541N
ICE17	8-759-916-79	s	IC SN74HC273N
L1	1-421-329-00	s	COIL, CHOKE
L2	1-421-329-00	s	COIL, CHOKE
L3	1-421-329-00	s	COIL, CHOKE
L4	1-421-329-00	s	COIL, CHOKE
Q1	8-759-937-22	s	IC BA707
Q2	8-729-801-83	s	TRANSISTOR 2SB1013
Q3	8-729-801-83	s	TRANSISTOR 2SB1013
Q4	8-729-900-36	s	TRANSISTOR DTC124ES
Q5	8-729-900-36	s	TRANSISTOR DTC124ES
Q6	8-729-900-36	s	TRANSISTOR DTC124ES
R3	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R6	1-249-434-11	s	RES, CARBON 27K 5% 1/6W
R7	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R8	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R9	1-249-411-11	s	RES, RES, CARBON 330 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(RS-23 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R10	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R11	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R12	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R13	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R14	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R15	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R16	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R17	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R18	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R19	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R20	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R21	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R22	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R23	1-249-416-11	s	RES, CARBON 820 5% 1/6W
R24	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R25	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R27	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R28	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R29	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R30	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R31	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R33	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R40	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R41	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R43	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R44	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R45	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R46	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R47	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R51	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R52	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R53	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R54	1-249-415-11	s	RES, CARBON 680 5% 1/6W
R57	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R58	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R59	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R60	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R61	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R62	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R63	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R64	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R65	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R66	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R67	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R68	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R69	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R70	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R76	1-249-420-11	s	RES, CARBON 1.8K 5% 1/6W
R81	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R83	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R89	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R91	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R96	1-249-431-11	s	RES, CARBON 15K 5% 1/6W
R99	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R100	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R101	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R102	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R103	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R104	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R105	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R106	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R107	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R108	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R109	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R110	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R111	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R112	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R113	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R114	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R115	1-249-429-11	s	RES, CARBON 10K 5% 1/6W

(RS-23 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R116	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R117	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R118	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R120	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R121	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R122	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R123	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R124	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R125	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R126	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R127	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R128	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R129	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R130	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R131	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R132	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R133	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R134	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
R135	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R136	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R137	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R139	1-249-413-11	s	RES, CARBON 470 5% 1/6W
R140	1-249-413-11	s	RES, CARBON 470 5% 1/6W
R143	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R144	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R156	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R157	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R159	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R160	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R161	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R162	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R163	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R164	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R165	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R166	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R171	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R172	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R173	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R174	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R175	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R176	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R177	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R178	1-249-431-11	s	RES, CARBON 15K 5% 1/6W
R179	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R180	1-247-849-00	s	RES, CARBON 5.6K 5% 1/6W
R181	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R182	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R183	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R184	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R185	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R186	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R187	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R188	1-249-441-11	s	RES, CARBON 100K 5% 1/6W
R192	1-249-439-11	s	RES, CARBON 68K 5% 1/6W
R193	1-249-438-11	s	RES, CARBON 56K 5% 1/6W
R195	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R196	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
RB1	1-231-567-00	s	RESISTOR BLOCK, 10KX2
RB2	1-231-567-00	s	RESISTOR BLOCK, 10KX2
RB3	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RV1	1-230-844-11	s	RES, VAR, METAL 20K
RV2	1-230-840-11	s	RES, VAR, METAL 1K
RV3	1-230-842-11	s	RES, VAR, METAL 5K

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

SE-47 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A−6025−112−A	o	COMPLETE PCB, SE−47
(This assembly includes the following parts.)			
1pc	7−682−647−09	s	SCREW +PWH 3X6
C19	1−123−661−00	s	CAP, ELECT 100uF 20% 6.3V
CN301M	1−506−483−21	o	RECEP, 4P, MALE
CN302M	1−506−489−11	o	RECEP, 10P, MALE
CN303M	1−506−487−11	o	RECEP, 8P, MALE
CN304M	1−506−485−11	o	RECEP, 6P, MALE
CN305M	1−506−485−21	o	RECEP, 6P, MALE
CN306M	1−506−485−31	o	RECEP, 6P, MALE
CN307M	1−506−485−41	o	RECEP, 6P, MALE
CN308M	1−506−487−11	o	RECEP, 8P, MALE
IC1	8−759−925−26	s	IC CX23026
IC2	8−759−925−26	s	IC CX23026
IC3	8−759−925−26	s	IC CX23026
IC4	8−759−045−84	s	IC MC14584BCP
IC5	8−759−045−84	s	IC MC14584BCP
IC6	8−759−045−84	s	IC MC14584BCP
L1	1−421−329−00	s	COIL, CHOKE
Q1	8−729−900−80	s	TRANSISTOR DTC114ES
Q2	8−729−900−80	s	TRANSISTOR DTC114ES
Q3	8−729−900−80	s	TRANSISTOR DTC114ES
Q4	8−729−900−80	s	TRANSISTOR DTC114ES
R9	1−249−410−11	s	RES, CARBON 270 5% 1/6W
R10	1−249−410−11	s	RES, CARBON 270 5% 1/6W
R11	1−249−410−11	s	RES, CARBON 270 5% 1/6W
R12	1−249−410−11	s	RES, CARBON 270 5% 1/6W
R13	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R14	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R15	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R16	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R20	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R21	1−249−413−11	s	RES, CARBON 470 5% 1/6W
R26	1−249−433−11	s	RES, CARBON 22K 5% 1/6W
R28	1−249−429−11	s	RES, CARBON 10K 5% 1/4W
RB1	1−231−411−00	s	RESISTOR BLOCK, 100KX8
RB2	1−231−557−00	s	RESISTOR BLOCK, 100KX4
RB3	1−231−541−00	s	RESISTOR BLOCK, 22KX4

SP-01 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A−6017−140−A	o	COMPLETE PCB, SP−01
(This assembly includes the following parts.)			
2pcs	3−673−249−00	o	LEVER, PC BOARD
2pcs	7−626−320−11	o	PIN, SPRING 3X8
4pcs	7−622−207−05	s	N 2.6, TYPE 2
1pc	7−628−254−30	s	+PSW, 2.6X10
1pc	3−715−590−41	o	LABEL, SERIAL NUMBER
2pcs	7−621−255−65	s	SCREW +B 2X10
2pcs	7−622−205−05	s	NUT M2, TYPE2
3pcs	7−628−254−30	s	+PSW, 2.6X10
4pcs	7−682−647−09	s	SCREW +PWH 3X6
C1	1−123−661−00	s	CAP, ELECT 100uF 20% 6.3V
C9	1−125−390−11	s	CAP, CERAMIC 0.047F 5.5V
C11	1−131−347−00	s	CAP, TANT 1uF 10% 35V
C13	1−131−347−00	s	CAP, TANT 1uF 10% 35V
C22	1−123−661−00	s	CAP, ELECT 100uF 20% 6.3V
C26	1−162−294−31	s	CAP, CERAMIC 0.001uF 10% 50V
C32	1−130−491−00	s	CAP, MYLAR 0.047uF 5% 50V
C56	1−123−661−00	s	CAP, ELECT 100uF 20% 6.3V
C59	1−123−661−00	s	CAP, ELECT 100uF 20% 6.3V
C60	1−130−483−00	s	CAP, MYLAR 0.01uF 5% 50V
CN1F	1−563−339−11	o	RECEP, 48P, FEMALE
CN722M	1−506−748−11	s	RECEP, DIN 96P, MALE
CN723M	1−506−746−11	s	RECEP, DIN 48P, MALE
D1	8−719−400−35	s	DIODE LN35BP
D2	8−719−908−06	s	DIODE ERA81−005
FB1	1−535−178−00	s	FERRITE BEAD
ICA2	8−759−916−29	s	IC SN74HC74N
ICA3	8−759−916−29	s	IC SN74HC74N
ICA4	8−759−921−08	s	IC SN74HC02N
ICA5	8−759−916−20	s	IC SN74HC14N
ICA6	8−759−916−12	s	IC SN74HC00N
ICA7	8−759−916−14	s	IC SN74HC04N
ICA8	8−759−916−12	s	IC SN74HC00N
ICA23	8−759−917−43	s	IC SN74HC138N
ICB4	8−759−916−29	s	IC SN74HC74N
ICB5	8−759−916−12	s	IC SN74HC00N
ICB6	8−759−921−19	s	IC SN74HC161N
ICB7	8−759−916−29	s	IC SN74HC74N
ICB8	8−759−916−14	s	IC SN74HC04N
ICB10	8−759−102−95	s	IC uPD4464C−15
ICB13	8−759−733−69	s	IC MBM27C256A−SP010130
ICB15	8−759−105−76	s	IC uPD71059C
ICB17	8−759−921−50	s	IC SN74HC573N
ICB18	8−759−105−75	s	IC uPD70108D−8
ICB21	8−759−916−46	s	IC SN74HC139N
ICB22	8−759−916−19	s	IC SN74HC11N
ICB23	8−759−916−14	s	IC SN74HC04N
ICC1	8−759−917−05	s	IC SN74HC541N
ICC2	8−759−917−05	s	IC SN74HC541N
ICC3	8−759−916−79	s	IC SN74HC273N
ICC4	8−759−921−19	s	IC SN74HC161N
ICC5	8−759−916−29	s	IC SN74HC74N
ICC7	8−759−925−26	s	IC CX23026
ICC8	8−759−925−26	s	IC CX23026
ICC9	8−759−925−26	s	IC CX23026
ICC10	8−759−925−26	s	IC CX23026
ICC11	8−759−916−50	s	IC SN74HC157N
ICC12	8−759−917−43	s	IC SN74HC138N
ICC13	8−759−917−43	s	IC SN74HC138N
ICC14	8−759−038−14	s	IC MC74HC4538AN
ICC16	8−759−803−70	s	IC LC74HC08
ICC17	8−759−921−34	s	IC SN74HC245N
ICC19	8−759−107−56	s	IC CXQ71011P
ICC20	8−759−916−29	s	IC SN74HC74N
ICC21	8−759−916−29	s	IC SN74HC74N
ICC22	8−759−916−35	s	IC SN74HC107N
ICC23	8−759−921−19	s	IC SN74HC161N
ICD1	8−759−107−52	s	IC CXQ71054P
ICD3	8−759−107−52	s	IC CXQ71054P
ICD5	8−759−917−05	s	IC SN74HC541N
ICD6	8−759−916−79	s	IC SN74HC273N

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SP-01 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
ICD7	8-759-925-26	s	IC CX23026
ICD8	8-759-925-26	s	IC CX23026
ICD9	8-759-925-26	s	IC CX23026
ICD10	8-759-925-26	s	IC CX23026
ICD11	8-759-925-26	s	IC CX23026
ICD12	8-759-921-34	s	IC SN74HC245N
ICD13	8-759-921-50	s	IC SN74HC573N
ICD14	8-759-921-34	s	IC SN74HC245N
ICD15	8-759-917-43	s	IC SN74HC138N
ICD16	8-759-917-43	s	IC SN74HC138N
ICD17	8-759-917-05	s	IC SN74HC541N
ICD19	8-759-917-05	s	IC SN74HC541N
ICD20	8-759-916-71	s	IC SN74HC244N
ICD21	8-759-921-17	s	IC SN74HC153N
ICD23	8-759-916-25	s	IC SN74HC32N
L1	1-421-329-00	s	COIL, CHOKE
Q1	8-729-900-37	s	TRANSISTOR DTC124EF
Q2	8-729-900-37	s	TRANSISTOR DTC124EF
Q3	8-729-900-37	s	TRANSISTOR DTC124EF
Q4	8-729-900-37	s	TRANSISTOR DTC124EF
R1	1-249-409-11	s	RES, CARBON 220 5% 1/6W
R2	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R3	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R4	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R5	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R6	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R7	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R8	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R10	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R11	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R12	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R13	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R14	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R15	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R16	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R18	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R19	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R20	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R29	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R30	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R35	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R36	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R37	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R38	1-214-557-00	s	RES, METAL 1K 1% 1/8W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB3	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB4	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB5	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB6	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB7	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB8	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB9	1-235-005-00	s	RESISTOR BLOCK, 47KX8
S1	1-553-856-00	s	SWITCH, PUSH
S2	1-553-856-00	s	SWITCH, PUSH
S3	1-554-397-21	s	SWITCH, TOGGLE
X1	1-567-798-12	s	CRYSTAL 14.74560000MHz

SW-157 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6017-143-A	o	COMPLETE PCB, SW-157
(This assembly includes the following parts.)			
4pcs	3-674-390-00	o	HOLDER (B), LED
2pcs	7-682-647-09	s	SCREW +PWH 3X6
C3	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C4	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C5	1-136-165-00	s	CAP, MYLAR 0.1uF 10% 50V
C6	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C7	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C8	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C11	1-102-110-00	s	CAP, CERAMIC 220PF 10% 50V
C15	1-124-242-00	s	CAP, ELECT 33uF 20% 25V
C17	1-123-661-00	s	CAP, ELECT 100uF 20% 6.3V
C19	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C20	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C21	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C22	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C23	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C24	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C25	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C26	1-102-106-00	s	CAP, CERAMIC 100PF 10% 50V
C27	1-161-485-00	s	CAP, CERAMIC 0.1uF 10% 50V
C28	1-161-485-00	s	CAP, CERAMIC 0.1uF 10% 50V
C29	1-131-386-00	s	CAP, TANT 33uF 10% 6.3V
CN502M	1-566-405-21	o	RECEP, 30P, MALE
CN503M	1-566-398-21	o	RECEP, 16P, MALE
CN504M	1-506-478-11	o	RECEP, 13P, MALE
CN505M	1-506-483-21	o	RECEP, 4P, MALE
CN506M	1-506-485-11	o	RECEP, 6P, MALE
CN507M	1-566-402-11	o	RECEP, 24P, MALE
D1	8-719-918-88	s	DIODE 1SS198
D2	8-719-918-88	s	DIODE 1SS198
D3	8-719-918-88	s	DIODE 1SS198
D4	8-719-918-88	s	DIODE 1SS198
D5	8-719-918-88	s	DIODE 1SS198
D6	8-719-918-88	s	DIODE 1SS198
D7	8-719-918-88	s	DIODE 1SS198
D8	8-719-918-88	s	DIODE 1SS198
D9	8-719-918-88	s	DIODE 1SS198
D10	8-719-918-88	s	DIODE 1SS198
D11	8-719-918-88	s	DIODE 1SS198
D12	8-719-918-88	s	DIODE 1SS198
D13	8-719-905-55	s	DIODE EAA5504S
D14	8-719-905-56	s	DIODE EBR5504S
D15	8-719-905-56	s	DIODE EBR5504S
D16	8-719-905-54	s	DIODE EBG5504S
IC1	8-759-909-59	s	IC SN76489AN
IC2	8-759-208-50	s	IC TA7368P
IC3	8-759-938-68	s	IC CXD1095Q
IC4	8-759-910-43	s	IC CX23028
IC5	8-759-938-68	s	IC CXD1095Q
IC6	8-759-205-00	s	IC TC74HC14F
IC7	8-759-011-90	s	IC MC34050P
IC8	8-759-205-00	s	IC TC74HC14F
IC9	8-759-205-06	s	IC TC74HC74F
IC10	8-759-170-05	s	IC UPC78M05H
Q1	8-729-900-45	s	TRANSISTOR DTC114EF
Q2	8-729-900-45	s	TRANSISTOR DTC114EF
Q3	8-729-900-45	s	TRANSISTOR DTC114EF
Q4	8-729-378-91	s	TRANSISTOR 2SD789
Q5	8-729-224-02	s	TRANSISTOR 2SC2240-BL
R9	1-247-849-00	s	RES, CARBON 5.6K 5% 1/6W
R10	1-247-849-00	s	RES, CARBON 5.6K 5% 1/6W
R11	1-249-393-11	s	RES, CARBON 10 5% 1/6W
R12	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R13	1-249-410-11	s	RES, CARBON 270 5% 1/6W
R22	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R23	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R24	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R37	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R38	1-249-411-11	s	RES, CARBON 330 5% 1/6W
R39	1-249-414-11	s	RES, CARBON 560 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SW-157 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R40	1-249-414-11	s	RES, CARBON 560 5% 1/6W
R45	1-249-415-11	s	RES, CARBON 680 5% 1/6W
R46	1-249-415-11	s	RES, CARBON 680 5% 1/6W
R47	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R48	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R49	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R50	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R51	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R52	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R53	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R54	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R55	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R58	1-249-414-11	s	RES, CARBON 560 5% 1/6W
R59	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47KX8
RB2	1-231-385-00	s	RESISTOR BLOCK, 4.7KX8
S1	1-554-045-21	s	SWITCH WITH LED, PUSH
S2	1-554-039-21	s	SWITCH WITH LED, PUSH
S3	1-554-040-21	s	SWITCH, PUSH
S4	1-554-041-41	s	SWITCH WITH LED, PUSH
S5	1-554-041-11	s	SWITCH WITH LED, PUSH
S6	1-554-041-11	s	SWITCH WITH LED, PUSH
S7	1-554-041-11	s	SWITCH WITH LED, PUSH
S8	1-554-041-21	s	SWITCH WITH LED, PUSH
S9	1-554-041-31	s	SWITCH WITH LED, PUSH
S10	1-554-041-11	s	SWITCH WITH LED, PUSH
S11	1-554-041-11	s	SWITCH WITH LED, PUSH
S12	1-554-041-11	s	SWITCH WITH LED, PUSH
SP1	1-503-299-00	s	SPEAKER

SW-178 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-878-11	o	PC BOARD, SW-158 WITHOUT COMPONENT
CN508M	1-506-478-11	o	RECEP, 13P, MALE
D1	8-719-918-88	s	DIODE 1SS198
D2	8-719-918-88	s	DIODE 1SS198
D3	8-719-918-88	s	DIODE 1SS198
D4	8-719-918-88	s	DIODE 1SS198
D5	8-719-918-88	s	DIODE 1SS198
D6	8-719-918-88	s	DIODE 1SS198
D7	8-719-918-88	s	DIODE 1SS198
D8	8-719-918-88	s	DIODE 1SS198
D9	8-719-918-88	s	DIODE 1SS198
D10	8-719-918-88	s	DIODE 1SS198
D11	8-719-918-88	s	DIODE 1SS198
D12	8-719-918-88	s	DIODE 1SS198
D13	8-719-918-88	s	DIODE 1SS198
D14	8-719-918-88	s	DIODE 1SS198
D15	8-719-918-88	s	DIODE 1SS198
D16	8-719-918-88	s	DIODE 1SS198
D17	8-719-918-88	s	DIODE 1SS198
D18	8-719-918-88	s	DIODE 1SS198
D19	8-719-918-88	s	DIODE 1SS198
D20	8-719-918-88	s	DIODE 1SS198
D21	8-719-918-88	s	DIODE 1SS198
D22	8-719-918-88	s	DIODE 1SS198
D23	8-719-918-88	s	DIODE 1SS198
D24	8-719-918-88	s	DIODE 1SS198
D25	8-719-918-88	s	DIODE 1SS198
D26	8-719-918-88	s	DIODE 1SS198
D27	8-719-918-88	s	DIODE 1SS198
D28	8-719-918-88	s	DIODE 1SS198
D29	8-719-918-88	s	DIODE 1SS198
D30	8-719-918-88	s	DIODE 1SS198
D31	8-719-918-88	s	DIODE 1SS198
D32	8-719-918-88	s	DIODE 1SS198
D33	8-719-918-88	s	DIODE 1SS198
D34	8-719-918-88	s	DIODE 1SS198
D35	8-719-918-88	s	DIODE 1SS198
D36	8-719-918-88	s	DIODE 1SS198
D37	8-719-918-88	s	DIODE 1SS198

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

SW-179 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-915-11	o	PC BOARD, SW-179 WITHOUT COMPONENT
CN205M	1-506-481-11	o	RECEP, 2P, MALE
S1	1-554-042-41	s	SWITCH WITH LED, PUSH

SY-124 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6017-150-A	o	COMPLETE PCB, SY-124
(This assembly includes the following parts)			
1pc	X-3715-349-1	o	PLATE ASSY, SHIELD, SUB
1pc	3-722-731-51	o	LABEL (B), SERIAL NUMBER (SY-124)
2pcs	3-673-249-11	o	LEVER, PC BOARD
1pc	3-715-590-61	o	LABEL, SERIAL NUMBER
1pc	3-715-590-71	o	LABEL, SERIAL NUMBER
2pcs	7-621-772-58	s	SCREW +B2×10
2pcs	7-622-205-05	s	NUT 2, TYPE 2
4pcs	7-622-207-05	s	NUT 2.6, TYPE 2
2pcs	7-626-320-11	o	PIN, SPRING 3×8
4pcs	7-628-254-30	s	SCREW +PS 2.6×10
4pcs	7-682-647-09	s	SCREW +PSW3×6
C1	1-124-589-11	s	CAP, ELECT 47μF 20% 16V
C2	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C3	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C4	1-124-589-11	s	CAP, ELECT 47μF 20% 16V
C5	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C6	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C7	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C8	1-124-589-11	s	CAP, ELECT 47μF 20% 16V
C9	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C10	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C11	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C12	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C13	1-124-229-00	s	CAP, ELECT 33μF 20% 10V
C14	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C15	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C16	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C17	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C18	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C19	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C20	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C21	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C22	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C23	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C24	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C25	1-164-097-11	s	CAP, CERAMIC 22000PP 50V
C26	1-161-379-00	s	CAP, CERAMIC 0.01μF 20% 25V
C27	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C28	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C30	1-162-294-31	s	CAP, CERAMIC 0.001μF 10% 50V
C31	1-126-094-11	s	CAP, ELECT 4.7μF 20% 35V
C32	1-123-611-00	s	CAP, ELECT 1μF 20% 50V
C33	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C35	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C36	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C37	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C39	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C41	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C42	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C49	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C53	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C54	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C61	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C62	1-124-229-00	s	CAP, ELECT 33μF 20% 10V
C63	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C64	1-123-611-00	s	CAP, ELECT 1μF 20% 50V
C65	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C66	1-124-229-00	s	CAP, ELECT 33μF 20% 10V
C67	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C68	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C69	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C70	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C71	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C72	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
C73	1-164-097-11	s	CAP, CERAMIC 22000PF 50V
CN1F	1-563-339-11	o	RECEP, 48P, FEMALE
CN413M	1-506-748-11	s	RECEP, DIN 96P, MALE
CN414M	1-506-746-11	s	RECEP, DIN 48P, MALE
D1	8-719-400-35	s	LED LN35BP (GREEN)
D2	8-719-800-60	s	LED TLR214 (RED)

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SY-124 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
ICA4	8-752-800-46	s	IC CXQ70108P-8
ICA6	8-759-203-48	s	IC TC74HC573P
ICA8	8-759-113-74	s	IC UPD7200IC
ICA9	8-759-737-95	s	IC MBM27C512-SY1240132
ICA10	8-749-901-66	s	ICDS1235Y
ICA12	8-759-105-76	s	IC UPD71059C
ICA13	8-759-105-77	s	IC UPD71054C
ICA14	8-759-917-05	s	IC SN74HC541N
ICA15	8-759-203-50	s	IC TC74HC574P
ICA16	8-759-795-28	s	IC PAL16L8B-SY124022
ICA17	8-759-300-55	s	IC HM6148HP-55
ICA18	8-759-916-29	s	IC SN74HC74N
ICA19	8-759-921-34	s	IC SN74HC245N
ICA20	8-759-203-50	s	IC TC74HC574P
ICA21	8-759-939-90	s	IC CD74HC40105E
ICB1	8-759-803-70	s	IC LC74HC08
ICB6	8-759-107-59	s	IC CXQ71086P
ICB13	8-759-038-14	s	IC MC74HC4538AN
ICB14	8-759-202-21	s	IC TC74HC32P
ICB15	8-759-202-26	s	IC TC74HC138P
ICB16	8-759-202-55	s	IC TC74HC244P
ICB17	8-759-909-16	s	IC CX7907A
ICB20	8-759-909-72	s	IC CX7912A
ICC1	8-759-202-21	s	IC TC74HC32P
ICC2	8-759-203-33	s	IC TC74HC367P
ICC3	8-759-107-56	s	IC CXQ71011P
ICC4	8-759-202-21	s	IC TC74HC32P
ICC5	8-759-202-21	s	IC TC74HC32P
ICC7	8-759-202-26	s	IC TC74HC138P
ICC8	8-759-112-36	S	IC UPD3341C
ICC9	8-759-112-36	s	IC UPD3341C
ICC10	8-759-917-05	s	IC SN74HC541N
ICC11	8-759-202-74	s	IC TC74HC04P
ICC13	8-759-004-64	s	IC MC74HC126N
ICC14	8-759-004-63	s	IC MC74HC125N
ICC15	8-759-202-21	s	IC TC74HC32P
ICC16	8-759-040-46	s	IC MC14046BCP
ICD1	8-759-916-29	s	IC SN74HC74N
ICD2	8-759-916-35	s	IC SN74HC107N
ICD3	8-759-202-74	s	IC TC74HC04P
ICD4	8-759-203-33	s	IC TC74HC367P
ICD5	8-759-011-90	s	IC MC34050P
ICD6	8-759-107-59	s	IC CXQ71086P
ICD7	8-759-916-29	s	IC SN74HC74N
ICD8	8-759-112-36	s	IC UPD3341C
ICD9	8-759-917-05	s	IC SN74HC541N
ICD10	8-759-112-36	s	IC UPD3341C
ICD13	8-759-916-20	s	IC SN74HC14N
ICD14	8-759-202-11	s	IC TC74HC00P
ICD15	8-759-202-11	s	IC TC74HC00P
ICD16	8-759-202-74	s	IC TC74HC04P
ICD17	8-759-202-74	s	IC TC74HC04P
ICD18	8-759-921-08	s	IC SN74HC02N
ICD19	8-759-202-21	s	IC TC74HC32P
ICD21	8-759-916-35	s	IC SN74HC107N
ICD22	8-759-202-24	s	IC TC74HC86P
L1	1-421-329-00	s	COIL, CHOKE
L2	1-421-329-00	s	COIL, CHOKE
L3	1-421-329-00	s	COIL, CHOKE
R4	1-249-411-11	s	RES, CARBON 330 5% 1/4W
R5	1-249-409-11	s	RES, CARBON 220 5% 1/4W
R6	1-249-409-11	s	RES, CARBON 220 5% 1/4W
R7	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R8	1-247-895-00	s	RES, CARBON 470K 5% 1/4W
R9	1-249-441-11	s	RES, CARBON 100K 5% 1/4W
R10	1-249-435-11	s	RES, CARBON 33K 5% 1/4W
R12	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R13	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R15	1-249-429-11	s	RES, CARBON 10K 5% 1/4W

(SY-124 BOARD, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R16	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R17	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R18	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R19	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R20	1-247-862-11	s	RES, CARBON 20K 5% 1/4W
R21	1-249-417-11	s	RES, CARBON 1K 5% 1/4W
R22	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R23	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
R24	1-249-405-11	s	RES, CARBON 100 5% 1/4W
R25	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
RB1	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB2	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB3	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB4	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB5	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB6	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB7	1-231-533-00	s	RESISTOR BLOCK 10K×4
RB8	1-231-410-00	s	RESISTOR BLOCK 10K×8
RB11	1-231-533-00	s	RESISTOR BLOCK 10K×4
S1	1-553-856-00	s	SWITCH with LED, PUSH
X1	1-567-794-11	s	OSCILLATOR, CRYSTAL 14, 31818MH
X2	1-567-795-11	s	OSCILLATOR, CRYSTAL 14.5MHz

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

TR-40 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	A-6025-113-A	o	COMPLETE PCB, TR-40
(This assembly includes the following parts.)			
1pc	7-682-647-09	s	SCREW +PWH 3X6
C1	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C4	1-162-284-31	s	CAP, CERAMIC 150PF 10% 50V
C7	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C8	1-162-294-31	s	CAP, CERAMIC 0.001uF 10% 50V
C9	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C10	1-131-365-00	s	CAP, TANT 10uF 20% 20V
C19	1-130-475-00	s	CAP, MYLAR 0.0022uF 5% 50V
C35	1-124-584-00	s	CAP, ELECT 100uF 20% 10V
C36	1-124-584-00	s	CAP, ELECT 100uF 20% 10V
C37	1-131-348-00	s	CAP, TANT 1.5uF 10% 35V
C38	1-131-348-00	s	CAP, TANT 1.5uF 10% 35V
C39	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C40	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C41	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
C42	1-162-282-31	s	CAP, CERAMIC 100PF 10% 50V
CN901M	1-506-473-11	o	RECEP, 8P, MALE
CN902M	1-506-475-11	o	RECEP, 10P, MALE
CN903M	1-506-471-11	o	RECEP, 6P, MALE
CN904M	1-506-468-11	o	RECEP, 3P, MALE
CN905M	1-506-475-21	o	RECEP, 10P, MALE
CN906M	1-506-483-21	o	RECEP, 4P, MALE
CN907M	1-506-618-11	o	RECEP, PS 6P, MALE
CN908M	1-506-486-11	o	RECEP, 7P, MALE
D1	8-719-815-55	s	DIODE 1S1555
D2	8-719-815-55	s	DIODE 1S1555
IC1	8-759-100-06	s	IC uPC4556C
IC2	8-759-603-82	s	IC M5241L
IC3	8-759-240-53	s	IC TC4053BP
IC4	8-759-100-06	s	IC uPC4556C
IC5	8-759-145-58	s	IC uPC4558C
IC6	8-759-145-58	s	IC uPC4558C
IC7	8-759-145-58	s	IC uPC4558C
IC8	8-759-145-58	s	IC uPC4558C
IC9	8-759-240-52	s	IC TC4052BP
IC10	8-759-925-26	s	IC CX23026
IC11	8-759-602-83	s	IC M5238P
L1	1-421-370-00	s	COIL, CHOKE
L2	1-421-370-00	s	COIL, CHOKE
L3	1-421-370-00	s	COIL, CHOKE
L4	1-421-370-00	s	COIL, CHOKE
Q1	1-807-103-11	s	TRANSISTOR DTC114YS
Q2	8-729-900-36	s	TRANSISTOR DTC124ES
Q3	8-729-900-36	s	TRANSISTOR DTC124ES
Q4	8-729-606-32	s	TRANSISTOR 2SC2603-E
Q5	8-729-900-36	s	TRANSISTOR DTC124ES
Q6	8-729-900-36	s	TRANSISTOR DTC124ES
Q7	8-729-201-05	s	TRANSISTOR 2SC2878-B
Q8	8-729-201-05	s	TRANSISTOR 2SC2878-B
Q9	8-729-201-05	s	TRANSISTOR 2SC2878-B
Q10	8-729-201-05	s	TRANSISTOR 2SC2878-B
Q11	8-729-900-36	s	TRANSISTOR DTC124ES
Q12	8-729-900-63	s	TRANSISTOR DTA124ES
R1	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R2	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R3	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R4	1-249-425-11	s	RES, CARBON 4.7K 5% 1/6W
R5	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R6	1-214-865-00	s	RES, METAL 1.1K 1% 1/2W
R7	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R8	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R9	1-247-826-00	s	RES, CARBON 620 5% 1/4W
R16	1-216-450-00	s	RES, METAL 82 5% 2W
R17	1-216-450-00	s	RES, METAL 82 5% 2W
R23	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R24	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R33	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R34	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R35	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R36	1-249-405-11	s	RES, CARBON 100 5% 1/6W
R37	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R38	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R39	1-249-435-11	s	RES, CARBON 33K 5% 1/6W
R40	1-249-436-11	s	RES, CARBON 39K 5% 1/6W

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

(TR-40 BOARD DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
R41	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R43	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R44	1-249-417-11	s	RES, CARBON 1K 5% 1/6W
R45	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R46	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R47	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R52	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R53	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R54	1-249-437-11	s	RES, CARBON 47K 5% 1/6W
R56	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R57	1-249-429-11	s	RES, CARBON 10K 5% 1/6W
R58	1-214-868-00	s	RES, METAL 1.5K 1% 1/2W
R59	1-249-421-11	s	RES, CARBON 2.2K 5% 1/6W
R60	1-249-433-11	s	RES, CARBON 22K 5% 1/6W
R61	1-249-429-11	s	RES, CARBON 10K 5% 1/4W
RB1	1-231-549-11	s	RESISTOR BLOCK, 47KX4
RY1	1-515-683-11	s	RELAY
T1	1-423-189-00	s	TRANSFORMER, INPUT
T2	1-423-189-00	s	TRANSFORMER, INPUT
TH1	1-807-749-11	s	THERMISTOR, POSITIVE 68-OHM
TH2	1-807-749-11	s	THERMISTOR, POSITIVE 68-OHM

TR-41 BOARD, DVR-1000

The following components are included in the CD BLOCK assy; A-6029-012-A.

Ref. No. or Qty	Part No.	SP	Description
Q1	8-729-116-45	s	TRANSISTOR PH110
Q2	8-729-116-45	s	TRANSISTOR PH110
Q3	8-729-116-45	s	TRANSISTOR PH110
Q4	8-729-116-45	s	TRANSISTOR PH110
Q5	8-729-116-45	s	TRANSISTOR PH110

VR-50 BOARD, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-620-907-11	o	PC BOARD, VR-50 WITHOUT COMPONENT
CN201M	1-506-471-11	o	RECEP, 6P, MALE
CN202M	1-506-471-11	o	RECEP, 6P, MALE
J1	1-507-552-21	s	JACK, PHANE
R1	1-237-579-11	s	RES, VAR, CARBON 10/10K
R2	1-228-549-00	s	RES WITH SW, VAR, CARBON, 10K(B)

NOTE: Please see pages D-37 and D-38 for the part numbers of capacitors and resistors that are not listed in the parts list.

FRAME, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc	1-559-046-11	s	WIRE, FLEXIBLE CARD 4P
1pc	1-559-107-11	s	CODE, CONNECTION (1m)
1pc	1-938-374-12	s	HARNESS, RF(A) Includes the CN743F.
1pc	1-938-375-12	s	HARNESS, RF(B) Includes the CN742F.
1pc	1-938-494-11	s	FLAT CABLE ASSY , IFN-1 50P/50P Includes the following connectors. CN727F (to MB-133 board) CN801F (to IF-138 board)
2pcs	1-559-045-11	s	WIRE, FLEXIBLE CARD 26P
CB1	1-532-545-51	s	BREAKER, CIRCUIT
CN101	1-526-956-11	s	INLET, WITH NOISE FILTER, 3P
CN102F	1-561-070-00	o	HOUSING, 4P
	1-561-067-00	o	CONTACT, FEMALE AWG14-20
CN102M	1-561-084-00	o	HOUSING, 4P
	1-561-068-00	o	CONTACT, MALE ARG14-20
CN103F (to PS-138 board)			
	1-560-072-00	o	HOUSING, 9P
	1-561-067-00	o	CONTACT, FEMALE AWG14-20
CN104F (to PS-138 board)			
	1-509-984-00	o	HOUSING, IL, 3P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN105F (to PS-138 board) Refer to MB-137 board			
CN106F (to PS-138 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN107F (to PS-138 board)			
	1-563-119-11	o	HOUSING, PS 10P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN108F (to PS-138 board)			
	1-563-120-11	o	HOUSING, PS 12P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN109F (to PS-138 board)			
	1-509-984-00	o	HOUSING, IL 3P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN124F (to PS-138 board)			
	1-561-073-00	o	HOUSING, 15P
	1-535-206-00	s	CONTACT, FEMALE AWG18-24
CN133F (to MB-137 board) Refer to MB-137 board			
CN134F (to MB-137 board) Refer to MB-137 board			
CN135F (to MB-137 board) Refer to MB-137 board			
CN201F (to FC-37 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN202F (to VR-50 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN203F (to LE-56 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN204F (to FP-24 board)			
	1-563-118-11	o	HOUSING, PS 8P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28

(FRAME, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
CN205F (to SW-179 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN206F (to PE-18 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN210F (to FC-37 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN211F (to FC-37 board) Refer to MB-137 board			
CN212F (to FC-37 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN213F (to FC-37 board) Refer to MB-137 board			
CN214F (to FC-37 board)			
	1-563-121-11	o	HOUSING, PS 14P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN215F (to FC-37 board) Refer to MB-137 board			
CN216F (to FC-37 boared)			
	1-562-148-11	o	HOUSING, 3P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN217F (to FC-37 board) Refer to MB-137 board			
CN218F (to FC-37 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN219F (to FC-37 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN220F (to FC-37 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN221F (to FC-37 board) Refer to MB-137 board			
CN222F (to FC-37 board)			
	1-563-121-11	o	HOUSING, PS 14P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN223F (to FC-37 board) Refer to MB-137 board			
CN301F (to SE-47 board)			
	1-562-149-11	o	HOUSING, 4P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN302F (to SE-47 board)			
	1-562-155-11	o	HOUSING, 10P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN303F (to SE-47 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN304F (to SE-47 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN305F (to SE-47 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN306F (to SE-47 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30

(FRAME, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
CN307F (to SE-47 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN308F (to SE-47 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN310F (to CS-21 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN406F (to CN-157 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN407F (to CN-157 board)			
	1-562-150-11	o	HOUSING, 5P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN410F (to CN-157 board)			
	1-563-122-11	o	HOUSING, PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN411F (to CN-157 board)			
	1-562-150-11	o	HOUSING, 5P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN412F (to CAPSTAN MOTOR)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN414F (to BP-10 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONNECTOR, FEMALE AWG24-28
CN415F (to BP-10 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN416F (to BP-10 board)			
	1-562-152-11	o	HOUSING, 7P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN417F (to BP-10 board)			
	1-562-149-11	o	HOUSING, 4P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN418F (to BP-10 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN421F (to DRUM)			
	1-561-518-11	o	HOUSING, IL 6P
	1-506-740-11	o	CONTACT, FEMALE AWG22-28
CN422F (to DRUM MOTOR)			
	1-561-519-11	o	HOUSING, IL 8P
	1-506-740-11	o	CONTACT, FEMALE AWG22-28
CN423F (to DRUM MOTOR)			
	1-561-518-11	o	HOUSING, IL 6P
	1-506-740-11	o	CONTACT, FEMALE AWG22-28
CN424F (to HEAD DRUM)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN430F (to AH-13 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN432F (to AH-13 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN433F (to AH-13 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30

(FRAME, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
CN434F (to AH-15 board)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN701F (to MB-133 board)			
	1-563-122-11	o	HOUSING PS 16P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN703F (to MB-133 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN704F (to FP-24 board)			
	1-563-127-11	o	HOUSING, PS 26P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN707F (to MB-133 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN708F (to MB-133 board)			
	1-562-155-11	o	HOUSING, 10P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN709F (to MB-133 board)			
	1-562-150-11	o	HOUSING, 5P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN710F (to MB-133 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN711F (to MB-133 board)			
	1-563-120-11	o	HOUSING, PS 12P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN712F (to MB-133 board)			
	1-563-121-11	o	HOUSING, PS 14P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN716F (to MB-133 board)			
	1-563-120-11	o	HOUSING, PS 12P
	1-563-115-11	o	CONNECTOR, FEMALE AWG24-28
CN717F (to MB-133 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN726F (to MB-133 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN728F (to MB-133 board)			
	1-561-863-00	o	HOUSING, 5P
	1-535-206-00	s	CONTACT, FEMALE AWG18-24
CN729F (to MB-133 board)			
	1-562-958-11	o	HOUSING, 15P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN730F (to MB-133 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN731F (to MB-133 board)			
	1-562-152-11	o	HOUSING, 7P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN732F (to MB-133 board)			
	1-563-116-11	o	HOUSING, PS 4P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN740F (to RF-15 board)			
	1-562-958-11	o	HOUSING, 15P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN741F (to RF-15 board)			
	1-562-157-11	o	HOUSING, 12P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30

Ref. No. or Qty	Part No.	SP	Description
CN743F (to RF-15 board)			
	1-562-157-11	o	HOUSING, 12P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30 Included in the HARNESS, RF(A).
CN744F (to RF-15 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN901F (to TR-40 board)			
	1-562-153-11	o	HOUSING, 8P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN902F (to TR-40 board)			
	1-562-155-11	o	HOUSING, 10P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN903F (to TR-40 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN904F (to TR-40 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN905F (to TR-40 board)			
	1-562-155-11	o	HOUSING, 10P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN906F (to TR-40 board)			
	1-562-149-11	o	HOUSING, 4P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN907F (to TR-40 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN908F (to TR-40 board)			
	1-562-152-11	o	HOUSING, 7P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN910F (to LO-015 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN911F (to LO-05 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN912F (to LO-05 board)			
	1-563-117-11	o	HOUSING, PS 6P
	1-563-115-11	o	CONTACT, FEMALE AWG24-28
CN913F (to LO-05 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN914F (to LO-05 board)			
	1-562-150-11	o	HOUSING, 5P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN915F (to LO-05 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN916F (to LO-05 board)			
	1-509-984-00	o	HOUSING, IL 3P
	1-560-298-00	o	CONTACT, FEMALE AWG22-28
CN920F (to PR-87 board)			
	1-562-157-11	o	HOUSING, 12P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN921F (to PR-87 board)			
	1-562-958-11	o	HOUSING, 15P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN922F (to PR-87 board)			
	1-562-958-11	o	HOUSING, 15P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN923F (to PR-87 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN930F (to PD-36 board) Refer to MB-137 board			
CN931F (to PD-36 board)			
	1-562-148-11	o	HOUSING, 3P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN940 (CUE OUT)			
	1-509-176-51	s	RECEP, XLR 3P, MALE (for UC,EK)
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for J)
CN941 (TIME CODE OUT)			
	1-509-176-51	s	RECEP, XLR 3P, MALE (for UC,EK)
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for J)
CN942 (MONITOR OUT R)			
	1-509-176-51	s	RECEP, XLR 3P, MALE(for UC,EK)
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for J)
CN943 (MONITOR OUT L)			
	1-509-176-51	s	RECEP, XLR 3P, MALE (for UC,EK)
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for J)
CN944 (TIME CODE IN)			
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for UC,EK)
	1-509-176-51	s	RECEP, XLR 3P, MALE (for J)
CN945 (CUE IN)			
	1-509-184-51	s	RECEP, XLR 3P, FEMALE (for UC,EK)
	1-509-176-51	s	RECEP, XLR 3P, MALE (for J)
CN946F (WFM MONITOR OUT)			
	1-561-781-21	s	RECEP, BNC, FEMALE
CN947F (WFM TRIGGER OUT)			
	1-561-781-21	s	RECEP, BNC, FEMALE
CN948F (SPARE 1)			
	1-561-781-21	s	RECEP, BNC, FEMALE
CN949F (SPARE 2)			
	1-561-781-21	s	RECEP, BNC, FEMALE
H1	8-825-770-01	s	FULL ERASE HEAD
H2	8-825-770-01	s	ERASE HEAD, CUE/CTL/TC
H3	8-825-770-12	s	R/P HEAD, CUE/CTL/TC
M001	8-835-227-01	s	MOTOR, DC, U-6A
M002	8-835-227-01	s	MOTOR, DC, U-6A
M003	8-835-234-01	s	MOTOR, DC, CAPSTAN BHF-1916A
M005	8-835-047-01	s	MOTOR, DC, CASSETTE-UP COMPARTMENT MNR-4000A
M006	8-835-055-01	s	MOTOR, DC, REEL POSITION DVR-4700A
M007	1-541-436-11	s	FAN, DC12V
M008	1-541-437-12	s	FAN, DC12V
M009	8-835-123-01	s	MOTOR, DC , THREADING MNR-7400A
PM001	1-454-434-11	s	SOLENOID, PLUNGER, PINCH
PM002	1-454-433-11	s	SOLENOID, PLUNGER, T-REEL BREAK
PM003	1-454-433-11	s	SOLENOID, PLUNGER, S-REEL BREAK
R1	1-214-865-00	s	RES,CARBON 1.1K 1% 1/2W
R2	1-214-868-00	s	RES,CARBON 1.5K 1% 1/2W

(FRAME, DVR-1000)

Ref. No. or Qty	Part No.	SP	Description
RV001	1-237-578-11	s	POTENTIOMETER 5K
S1	⚠ 1-570-052-11	s	SWITCH, PUSH, POWER
S2	⚠ 1-554-011-00	s	SWITCH, ROCKER, VOLTAGE SELECTOR
S3	1-514-524-00	s	SLIDE SWITCH
S4	1-514-524-00	s	SLIDE SWITCH
R1	1-212-534-11	s	RES, METAL 1.1K 1% 1/2W
R2	1-212-537-11	s	RES, METAL 1.5K 1% 1/2W
W131 (to MB-137 board)			
	1-562-746-11	o	HOUSING, 13P
	1-564-831-11	o	TERMINAL
W132 (to MB-137 board)			
	1-562-745-11	o	HOUSING, 12P
	1-564-831-11	o	TERMINAL
W133 (to MB-137 board)			
	1-562-748-11	o	HOUSING, 15P
	1-564-831-11	o	TERMINAL
W134 (to MB-137 board)			
	1-562-748-11	o	HOUSING, 15P
	1-564-831-11	o	TERMINAL
W135 (to MB-137 board)			
	1-562-747-11	o	HOUSING, 14P
	1-564-831-11	o	TERMINAL
W413 (to BP-10 board)			
	1-562-738-11	o	HOUSING, 5P
	1-564-831-11	o	TERMINAL

FRAME, DVR-1000/FUNCTION CONT. PNL.

Ref. No. or Qty	Part No.	SP	Description
1pc	1-464-765-11	s	DISPLAY UNIT, EL
1pc	1-515-618-11	s	CLUTCH, ELECTROMAGNETIC
1pc	1-938-609-11	o	FLAT CABLE ASSY, 16P/16P CPH-2 Include the following connectors. CN4F (to EL DISPLAY) CN503F (to SW-157 Board)
CN1F (to CP-106 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN501F (to CP-106 board)			
	1-563-883-11	o	HOUSING, 30P
	1-563-869-11	o	CONTACT, FEMALE AWG26-30
CN502F (to SW-157 board)			
	1-563-883-11	o	HOUSING, 30P
	1-563-869-11	o	CONTACT, FEMALE AWG26-30
CN503F (to SW-157 board)			
	1-563-876-11	o	HOUSING, 16P
	1-563-869-11	o	CONTACT, FEMALE AWG26-30 Included in the flat cable assy CPH-2.
CN504F (to SW-157 board)			
	1-562-627-11	o	HOUSING, 13P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN506F (to SW-157 board)			
	1-562-627-11	o	HOUSING, 13P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN507F (to SW-157 board)			
	1-563-880-11	o	HOUSING, 24P
	1-563-869-11	o	CONTACT, FEMALE AWG26-30
CN508F (to SW-158 board)			
	1-562-151-11	o	HOUSING, 6P
	1-563-088-11	o	CONTACT, FEMALE AWG24-30
CN509F (to PS-138 board)			
	1-563-880-11	o	HOUSING, 24P
	1-563-869-11	o	CONTACT, FEMALE AWG26-30

ACCESSORIES SUPPLIED, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
1pc (for UC)	⚠ 1-551-812-00	s	CORD, POWER 3P
1pc (for J)	⚠ 1-534-754-00	s	CORD, POWER 2P
1pc (for EK)	⚠ 1-551-852-00	s	CORD, POWER
2pcs	A-6001-012-A	o	ANGLE ASSY, RACK
2pcs	7-682-265-09	s	SCREW +K 4X16
1pc	A-6001-011-A	s	EXTENTION BOARD, EX-129

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
7pcs	7-682-948-01	s	SCREW +PSW3X8
12pcs	7-622-205-05	s	NUT M2 TYPE2
12pcs	7-628-253-40	s	SCREW +PS2X10
CN1M	1-506-748-11	s	RECEP, DIN 96P, MALE
CN2M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN3M	1-506-746-11	s	RECEP, DIN 48P, MALE
CN4F	1-563-341-11	s	RECEP, DIN 96P, FEMALE
CN5F	1-563-339-11	o	RECEP, DIN 48P, FEMALE
CN6F	1-563-339-11	o	RECEP, DIN 48P, FEMALE
1pc	A-6032-079-A	o	RS-232C PANEL ASSY

(This assembly includes the following parts.)

Ref. No. or Qty	Part No.	SP	Description
2pcs	3-576-921-00	s	SPRING, COMPRESSION
2pcs	3-680-316-00	s	NUT 4, STOPPER
2pcs	7-682-565-04	s	SCREW, +B4×16
2pcs	7-688-004-12	s	W4, MIDDLE

IF-210 BOARD, DVR-1000

The following components are included in the RS-232C PANEL Assy: A-6032-079-.

Ref. No. or Qty	Part No.	SP	Description
2pcs	7-662-207-05	s	NUT 2.6, TYPE2
2pcs	7-628-254-35	s	SCREW +PS2.6×10
2pcs	7-682-948-01	s	SCREW +PSW3×8
C1	1-126-153-11	s	CAP. ELECT 22MF 20% 6.3V
C2	1-162-781-11	s	CAP. CERAMIC 0.022µF 5% 50V
C3	1-162-781-11	s	CAP. CERAMIC 0.022µF 5% 50V
C4	1-162-781-11	s	CAP. CERAMIC 0.022µF 5% 50V
C5	1-162-781-11	s	CAP. CERAMIC 0.022µF 5% 50V
C6	1-124-234-11	s	CAP. ELECT 22µF 20% 16V
C7	1-124-234-11	s	CAP. ELECT 22µF 20% 16V
C8	1-124-234-11	s	CAP. ELECT 22µF 20% 16V
C9	1-124-234-11	s	CAP. ELECT 22µF 20% 16V
C10	1-124-589-11	s	CAP. ELECT 47µF 20% 16V
C11	1-124-589-11	s	CAP. ELECT 47µF 20% 16V
CN1M	1-506-746-11	s	RECEP. DIN 48P, MALE
CN2	1-563-772-21	s	RECEP, D-SUB 25P
FB1	1-535-178-00	s	FERRITE BEAD
IC1	8-759-916-29	s	IC SN74HC74N
IC2	8-759-202-89	s	IC TC74HC139P
IC3	8-759-107-51	s	IC CXQ71051P
IC4	8-759-014-25	s	IC MC145146P
IC5	8-759-947-28	s	IC DS1228
IC6	8-759-202-12	s	IC TC74HC02P
IC7	8-759-947-28	s	IC DS1228
IC8	8-759-917-05	s	IC SN74HC541N
R1	1-249-423-11	s	RES, CARBON 3.3K 5% 1/6W
RB1	1-235-005-00	s	RESISTOR BLOCK, 47K×8
RB2	1-235-005-00	s	RESISTOR BLOCK, 47K×8
RB3	1-235-359-11	s	RESISTOR BLOCK, 47K×4

OPTIONAL FIXTURE, DVR-1000

Ref. No. or Qty	Part No.	SP	Description
	J-6041-650-A		TENSION ARM BENDING TOOL
	J-6041-670-A		THICKNESS GAUGE
	J-6041-700-A		ALLEN WRENCH SET, L-SHAPED HEX.
	J-6041-770-A		IC TEST CLIP, TC-16
	J-6041-780-A		IC TEST CLIP, TC-20
	J-6152-450-A		WIRE CLEARANCE GAUGE SET
	J-6251-090-A		TORQUE DRIVER BIT
	J-6251-110-A		SCANNER ECCENTRICITY ADJ. GAUGE
	J-6251-120-A		HEAD PROJECTION MEASUREMENT GAUGE
	J-6251-160-A		GUIDE RAIL ADJ. TOOL
	J-6251-170-B		REEL PLATE (M)
	J-6251-210-A		PINCH ROLLER ADJ. TOOL
	J-6251-850-A		PINCH ROLLER CHECK TOOL
	J-6251-870-A		S-TENSION ARM OUTPUT CHECK TOOL
	J-6252-170-A		CASSETTE FOR IN SWITCH "OFF"
	J-6252-180-A		CASSETTE FOR IN SWITCH "ON"
	J-6252-190-A		REEL TABLE HEIGHT ADJ. TOOL
	J-6252-200-A		S-PLATE ADJ. TOOL
	J-6252-210-A		HEAD TIP MICROSCOPE
	J-6252-300-A		FLAT-PLATE
	J-6252-310-A		PRT HARNESS GUIDE
	J-6252-360-A		GUIDE S5 ZENITH CHECK TOOL
	J-6252-370-A		GUIDE T6 ZENITH CHECK TOOL
	J-6252-380-A		GUIDE S4 HEIGHT ADJ. TOOL
	J-6252-400-A		REEL TABLE SHAFT ADJ. TOOL
	J-6252-510-A		TORQUE DRIVER 6 kg-cm
	J-6252-520-A		TORQUE DRIVER 12 kg-cm
	J-6252-530-A		TORQUE DRIVER 26 kg-cm
	J-6252-540-A		BITS SET FOR TORQUE DRIVER
	J-6252-730-A		SLANT CHECK MASTER
	J-6253-420-A		MICROSCOPE ATTACHMENT
	J-6263-470-A		ROVING DAC
	J-6264-360-A		BNC-UM CABLE
	Y-2031-001-0		CLEANING FLUIDE
	1-559-042-21		CN-A CABLE ASSY, 2m
	1-559-042-31		CN-A CABLE ASSY, 4m
	1-559-936-11		CONTROL PANNEL CABLE 10m
	2-034-697-00		CLEANING PIECE
	2-379-736-02		PLATE, NUT
	3-715-470-01		SPACER, SLANT GUIDE t=0.1 mm
	3-715-470-11		SPACER, SLANT GUIDE t=0.05 mm
	3-715-470-21		SPACER, SLANT GUIDE t=0.02 mm
	3-715-470-31		SPACER, SLANT GUIDE t=0.01 mm
	3-735-120-01		BRACKET
	3-735-121-01		RAIL, SLIDE
	3-735-152-01		BAND, CLEANING
	7-662-001-41		MOLYTON GREASE No. 320
	7-662-001-62		SONY GREASE SGL-501
	7-700-733-01		ALIGNMENT SCREWDRIVER, SLOTTED HEAD
	7-700-766-01		SCREWDRIVER, HEX, 0.89 mm
	7-700-766-02		SCREWDRIVER, HEX, 1.4 mm
	7-700-766-03		SCREWDRIVER, HEX, 2 mm
	7-700-766-04		SCREWDRIVER, HEX, 2.5 mm
	7-700-766-05		SCREWDRIVER, HEX, 3 mm
	7-723-902-00		DENTAL MIRROR
	8-960-070-01		ALIGNMENT TAPE, DR-5-1A
	8-960-070-51		ALIGNMENT TAPE, DR-5-1B

SECTION E
CHANGED PARTS

UP TO #33199 (J)
UP TO #32199 (UC)
UP TO #32399 (EK)

#33201 & UP (J)
#33201 & UP (UC)
#32401 & UP (EK)

SP-01 BOARD

ICA6	8-759-202-11	s	IC TC74HC00P	8-759-916-12	s	IC SN74HC00N
ICA7	8-759-202-74	s	IC TC74HC04P	8-759-916-14	s	IC SN74HC04N
ICA8	8-759-202-11	s	IC TC74HC00P	8-759-916-12	s	IC SN74HC00N
ICA23	8-759-202-26	s	IC TC74HC138P	8-759-917-43	s	IC SN74HC138N
ICB5	8-759-202-11	s	IC TC74HC00P	8-759-916-12	s	IC SN74HC00N
ICB6	8-759-202-30	s	IC TC74HC161P	8-759-921-19	s	IC SN74HC161N
ICB8	8-759-202-74	s	IC TC74HC04P	8-759-916-14	s	IC SN74HC04N
ICB17	8-759-203-48	s	IC TC74HC573P	8-759-921-50	s	IC SN74HC573N
ICB21	8-759-202-89	s	IC TC74HC139P	8-759-916-46	s	IC SN74HC139N
ICB22	8-759-202-16	s	IC TC74HC11P	8-759-916-19	s	IC SN74HC11N
ICB23	8-759-202-74	s	IC TC74HC04P	8-759-916-14	s	IC SN74HC04N
ICC4	8-759-202-30	s	IC TC74HC161P	8-759-921-19	s	IC SN74HC161N
ICC12	8-759-202-26	s	IC TC74HC138P	8-759-917-43	s	IC SN74HC138N
ICC13	8-759-202-26	s	IC TC74HC138P	8-759-917-43	s	IC SN74HC138N
ICC14	8-759-202-83	s	IC TC74HC4538P	8-759-038-14	s	IC MC74HC4538AN
ICC23	8-759-202-30	s	IC TC74HC161P	8-759-921-19	s	IC SN74HC161N
ICD13	8-759-203-48	s	IC TC74HC573P	8-759-921-50	s	IC SN74HC573N
ICD15	8-759-202-26	s	IC TC74HC138P	8-759-917-43	s	IC SN74HC138N
ICD16	8-759-202-26	s	IC TC74HC138P	8-759-917-43	s	IC SN74HC138N
ICD20	8-759-202-55	s	IC TC74HC244P	8-759-916-71	s	IC SN74HC244N
ICD21	8-759-202-93	s	IC TC74HC153P	8-759-921-17	s	IC SN74HC153N
ICD23	8-759-202-21	s	IC TC74HC32P	8-759-916-25	s	IC SN74HC32N

SY-124 BOARD

ICB13	8-759-203-83	s	IC TC74HC4538P	8-759-038-14	s	IC MC74HC4538AN